ADVANCED ACCOUNTANCY

To The Academic Community

April, 1972. No fresh issue of shares is made for redemption of preference shares. 25 16

(Capital redemption reserve account Rs. 1,00,000)

[Hint : Sell investment, realise debtors and arrange bank overdraft]

17. The summarised balance sheet of Proper Ltd. on 31st December 1960, was :

	Rs.		Rs.
Share capital :		Freehold property	28,00,000
6% Redeemable preference shares of Rs 10 each	10,00,000	Other fixed assets	18,00,000
Ordinary shares of Rs. 10 each	20,00,000	Current assets (including balances at bank)	29,00,000
	30,00,000		
General reserve	10,00,000		
Profit and loss account	18,00,000		
5% Debentures	5,00,000		
Current liabilities	12,00,000		
	Rs. 75,00,000		Rs. 75,00,000

The directors decided to : (*i*) repay the redeemable preference shares of Rs. 10 each at par, (*ii*) repay debentures at a premium of 2% ; (*iii*) make a bonus issue to the ordinary shareholders of one Rs. 10 share for every two Rs. 10 shares held in order to capitalise part of the undistributed profits.

The appropriate resolutions having been passed, the above transactions were duly completed.

You are required to show : (*a*) the appropriate journal entries to record the transactions in the books of the company ; and (*b*) the balance sheet as it would appear after the completion of the transactions. 25 17

(C.R.R. A/c : Rs. 10,00,000 ; Total of B/S Rs. 59,90,000)

*18. A company wants to redeem its 10,000 6% preference shares of Rs. 10 each, Rs 8 called up at 10% premium. The ledger accounts show the following balances :

	Rs.
Share premium	2,000
Profit and loss	10,000

The directors redeemed the shares by making minimum fresh issue of equity shares of Rs. 10 each at 5% premium. Give journal entries. 25 18

(Capital redemption reserve account Rs. 6,660 ; Fresh issue Rs. 93,340)

[Hints : 1. Make shares fully paid up

2. Assume that minimum fresh issue is Rs. x Find out the value of x by using the following equation

$$1,10,000 - 12,000 + x + \frac{x}{20}$$]

*19 Resale Ltd , a retail trading company, decided that the value of its freehold properties should be used to provide additional working capital.

The summarised balance sheet of the company as on 31st March, 1969 showed the following :

Liabilities	Rs.	Assets	Rs.	Rs.
5,000 6% redeemable preference shares of Rs. 10 each	50,000	Freehold properties, at cost	1,75,000	
8,000 Equity shares of Rs. 10 each	80,000	Depreciation	35,000	
Share premium account	3,000			1,40,000
Profit and loss account	69,000	Furniture and equipment at cost	90,000	
8% Debentures (secured on freehold properties)	70,000	Depreciation	30,000	
Creditors	35,000			60,000
		Stock		30,000
		Debtors		72,000
		Balance at bank		5,000
Rs.	3,07,000		Rs.	3,07,000

Note : Depreciation on the freehold properties has been provided at 2% per annum, on cost.

The following action was taken: (1) The freehold properties were sold for Rs. 2,00,000 to an insurance company, who leased them back to Resale Ltd, for 21 years at an annual rental of Rs. 15,000, Resale Ltd. continuing to be responsible for all repairs and insurance. (2) The 8% debentures were discharged at par. (3) The 5,000 6% redeemable preference shares were redeemed at a premium of 10%.

The directors estimate that, in addition to the effect of the above transactions, the increased working capital available will enable the company to improve profits by Rs. 11,000 per annum.

You are required: (*a*) to show the journal entries necessary to record the above transactions (including cash) in the company's books, and (*b*) to calculate the effect on the future annual profits (before taxation) available for distribution to equity shareholders.

(C.A. Inter., England, 1969 ; Modified)

(*Capital redemption reserve account Rs. 50,000 ; Increase in future annual profits available for distribution to equity shareholders Rs. 8,100*)

[Hint : *Increase in profit*

	Rs.
Depreciation no longer chargeable	3,500
Debenture interest no longer payable	5,600
Preference dividends no longer payable	3,000
Improvements in profits	11,000
	23,100
Less Annual rent payable	15,000
Increase in future profits	Rs. 8,100]

*20 On 30th June, 1971 the summarised balance sheet of Switch Ltd. showed the following position :

Liabilities	Rs.	Assets	Rs.
Issued share capital :		Sundry assets	5,62,850
17,500 6½% redeemable preference shares of Rs. 10 each fully paid	1,75,000		
25,000 Equity shares of Rs 10 each fully paid	2,50,000		
Profit and loss account	95,000		
Sundry creditors	19,600		
Bank overdraft	23,250		
	Rs. 5,62,850		Rs. 5,62,850

The preference shares are redeemable at a premium of 5% on 1st July 1971, and in order to facilitate the redemption the following procedure was adopted : (1) 10,000 Equity shares were issued at a premium of 20%. (2) Rs. 1,50,000 9% Unsecured Loan Stock, 1985/1995 was issued at 97. Both issues were fully subscribed and the preference shares were redeemed on the due date.

You are required to prepare : (*a*) the journal entries necessary to record the above transactions (including cash), and (*b*) a balance sheet showing the position after redemption.

(C.A. Inter., England, 1971 ; Modified)

(Capital redemption reserve account Rs. 75,000 ; Balance sheet total Rs. 6,21,350)

SUGGESTED READING

1. *Accountancy*—William Pickles
2. *A Modern Approach to Company Accounts*—John Kellock
3. Lectures on Company Law—Shah
4. *Business Accounting*, Vol. II—F. Wood

3

Company Accounts—Debentures

This chapter deals with the accounting treatment of another source of raising finance, the debentures, the first being shares. The chapter is divided into five parts : (*i*) theory ; (*ii*) issue of debentures ; (*iii*) provision for the redemption of debentures ; (*iv*) redemption of debentures ; (*v*) redemption of debentures by purchasing them at cum- or ex-interest price.

A—THEORY

Definition- The word 'debenture' is used to signify the acknowledgement of a debt, given under the seal of the company and containing a contract for the repayment of the principal sum at a specified date and for the payment of interest (usually half-yearly) at a fixed rate per cent until the principal sum is repaid, and it may or may not give a charge on the assets of the company as security for the loan. The Companies Act defines debentures as "debenture includes debenture stock, bonds and any other securities of a company, whether constituting a charge on the assets of the company or not."

Purposes of issuing debentures. Debentures have got a definite and significant place in the financial plan of a company. A company has to tap this source of finance for its initial needs and also for its expansion and development schemes. It invities the investing class to give money as loan instead of contributing it as a part of capital. Financing the plan by issuing debentures gives certainty of finance for a specific period and provides an opportunity to trade on equity.

Type of debentures. Debentures can be classified according to security, permanence, priority convertibility and records point of view.

(1) **Security point of view.** (*a*) *Naked debentures* are those which are not secured. Companies of very good standing are able to issue debentures of this type. The are not very common. (*b*) *Mortgage Debentures* are those debentures which are secured either on a particular asset called *fixed charge* or on the general assets of the company called *floating charge*.

(2) **Permanence point of view.** (*a*) *Redeemable debentures* are those debentures which are redeemed or the payment of which is made after a specified time. Debentures are redeemable—(*i*) at the expiry of a specified period either at par or at premium ; (*ii*) by purchasing in the open market at any time at the price prevailing in the market ; (*iii*) by annual drawings. (*b*) *Irredeemable debentures.* In this case the issuing company does not fix any date by which they should be redeemed and the holders of such debentures cannot demand payment from the company so long as it is a going concern. Usually such debentures are repayable after a long period of time or on winding up of the company.

(3) Priority point of view. (*a*) *First debentures* are those which are repaid before other debentures are paid out. (*b*) *Second debentures* are those which are paid after the payment to the first debentureholders is made.

(4) Convertibility point of view (*a*) Convertible debentures, the holders of which are given the *option to convert the debenture fully or* partly into equity shares after a specified time. In recent years Telco, Reliance and Metal Box have issued such debentures and they have become popular with investors. (*b*) Non-convertible debentures, the holders of which have no right to convert them into equity shares.

(5) Records point of view. (*a*) *Bearer debentures* are those which are transferred by mere delivery and the company does not keep any record of debentureholders' names and addresses. Payment of interest is made on production of coupons attached with the debentures. (*b*) *Registered debentures* are those which are transferable only by transfer deed. Names, addresses, particulars of the debentures possessed by them are entered in the register. Interest is paid to one whose name appears in the register.

Differences between debentureholder and shareholder. (*i*) Debentureholder is a loan creditor while a shareholder is one of the proprietors of the company. (*ii*) Debentureholder gets interest on the amount lent by him while the shareholder gets dividend out of profit. (*iii*) Debenture interest must be paid whether or not there are profits while the dividend is paid only when there are profits Thus, the former is a charge against profits and the latter an "appropriation of profits." (*iv*) The amount of debentures is paid back as per the terms of redemption while the amount of the share cannot be paid back without legal formalities (*v*) In case of winding up, the amount of the debentureholders, being outsiders, is paid first. If some amount is left then it is returned to the shareholders (*vi*) Debentures can be issued on any condition but shares at discount can be issued only on the completion of certain legal formalities.

Differences between debenture and debenture stock. (*i*) Debenture need not be fully paid ; debenture stock must always be fully paid up (*ii*) Debentures are transferable only in their entirety while debenture stock is transferable in fractions. (*iii*) Debentures have identity in terms of numbers assigned to them There is no such identity for debenture stock.

Three stages of debenture There are three stages of accounting for debentures : (*i*) when debentures are *issued* (*ii*) when *provision for its redemption* is made ; and (*iii*) when ultimately debentures are *redeemed*. A detailed study of each stage is made in the following pages.

B—ISSUE OF DEBENTURES

Issue of debenture m[illegible] from three different angles : (1) consideration point of view [illegible] redemption point of view.

(1) *From consideration point of view.* From consideration point of [illegible] three ways (*a*) for consi- [illegible] colla- [illegible]

[illegible] When debentures are issued for cash, [illegible]

Credit Debenture account

Debentures for cash may be issued at par, at discount, or at premium. This has been discussed under the heading "from price point of view" on page 4·87.

(*b*) *For consideration other than cash.* Sometimes a company purchases assets from the vendor and issues debentures in payment of purchase consideration. This is called issue of debentures for consideration other than cash. Journal entries for recording the transactions are .

(*i*) *Debit* Assets account
Credit Vendor account
(Entry for the purchase of sundry assets)

(*ii*) *Debit* Vendor account
Credit Debenture account
(Entry for the issue of debenture)

Debentures issued to the vendor for consideration other than cash can again be issued at par, at premium, or at discount. Illustration on pages 87-89 show the working.

(*c*) *As collateral security.* This is the third type of consideration for which company issues debentures. Issue of debentures as a collateral security means issue of debentures as a subsidiary or secondary security, that is, a security in addition to the principal security. Secondary security is to be realised only when the principal security fails to pay the amount of loan. Debentures issued as a collateral security can be dealt with in two ways in the books :

(*i*) *First method.* No entry is made in the books. On the liability side of the balance sheet below the item of loan a note to the fact that it has been secured by the issue of debentures is appended. This is shown in the balance sheet as follows :

BALANCE SHEET

	Rs.
Debentures :	
5,000 debentures of Rs. 100 each at par	5,00,000
Loan from bankers (collaterally secured by the issue of Rs. 10,000 debentures)	8,000

(*ii*) *Second method.* Sometimes issue of debentures as collateral security is recorded by making a journal entry as follows :

Debenture suspense account Dr. (This appears on the assets side)
To Debenture account (This appears on the liabilities side)

When the loan is paid the above entry is cancelled by means of a reverse entry. In the second case the balance sheet is framed as follows :

BALANCE SHEET (*Extract*)

Capital and Liabilities	Rs.	*Property and Assets*	Rs.
Debentures :		Debenture suspense account (Debentures issued as collateral security for loan as *per contra*)	10,000
5,100 debentures of Rs. 100 each at par	5,10,000		
Loan from bankers :	8,000		

(2) From price point of view. From price point of view debentures can be issued in three ways: (a) at par: (b) at discount, and at (c) premium.

Debenture is said to have been issued at par when the amount collected for it is equal to the nominal value of the debenture; for example, the issue of Rs. 100 debenture for Rs 100. Debenture is said to have been issued at discount when the amount collected for it is less than its nominal value; for example, issue of Rs. 100 debenture for Rs. 95 (Rs. 5 is the discount which is a loss to the company). And debenture is said to have been issed at premium when the price charged is more than its nominal value; for example, the issue of Rs. 100 debenture for Rs. 105 (Rs. 5 is premium which is a gain to the company). Entries in all the three cases are as follows:

(*i*)	When Debenture is issued at par:			
	Bank account	Dr.	100	
	To Debenture account			100
(*ii*)	When debenture is issued at discount:			
	Bank account	Dr.	95	
	Discount account	Dr.	5	
	To Debenture account			100
(*iii*)	When debenture is issued at premium:			
	Bank account	Dr.	105	
	To Debenture account			100
	To Premium on debenture account			5

Illustration 35. (For consideration other than cash)

The Promising Company Ltd took over assets of Rs 3,50,000 and liabilities of Rs. 30,000 of Goneby Company for the purchase consideration of Rs. 3,30,000. The Promising Company Ltd paid the purchase consideration by issuing debentures of Rs. 100 each at 10% premium. Give journal entries in the books of the Promising Company Ltd.

Solution:

JOURNAL OF PROMISING COMPANY LTD

Date			Rs.	Rs.
	Sundry Assets	Dr	3,50,000	
	Goodwill 1	Dr.	10,000	
	To Liabilities			30,000
	To Goneby Company			3,30,000
	(Being purchase of assets and liabilities of the Goneby Company)			
	Goneby Company	Dr.	3,30,000	
	To Debentures (2)			3,00,000
	To Premium on issue of debentures			30,000
	(Being issue of debentures at 10% premium)			

Tutorial Notes

(1) Difference between the debit and credit side of the entry has been put to goodwill account. If the difference were on the credit side of the journal entry, the amount would have been credited to the capital reserve account.

(2) The amount of debenture has been calculated as follows:

∵ For making payment of Rs. 110, company has to issue 1 Debenture

∴ For making payment of Rs. 3,30,000 company has to issue 1/110 x Rs. 3,30,000 =3,000 Debentures of Rs. 100 each, *i.e.*, Rs. 3,00,000.

Illustration 36. (For consideration other than cash)

A company purchased assets of Rs. 3,50,000 and took over liabilities of Rs. 30,000. It agreed to pay the purchase price Rs. 3,35,000 by issuing debentures of Rs. 100 each at a premium of 10%. The debentures of the same company are quoted in the market at Rs. 130.

You are required to give journal entries for recording the transactions in the books of the purchasing company.

Solution :

JOURNAL OF THE PURCHASING COMPANY

Date			Rs.	Rs.
	Sundry assets account	Dr.	3,50,000	
	Goodwill account	Dr.	15,009	
	To Vendor account			3,35,009 (1)
	To Sundry liabilities account			30,000
	(Being the take over of the business of the vendor company)			
	Vendor account	Dr.	3,35,009	
	To Debenture account			3,04,500
	To Premium on debenture account			30,450
	To Cash account			59 (1)
	(Being payment of purchase consideration by issuing debentures at 10% premium)			

Tutorial Notes

(1) The purchase price of Rs. 3,35,000 is to be discharged by issue of debentures of Rs. 100 each at a premium of 10%. In order to calculate the number of debentures to be issued, we have to divide the purchase price by Rs. 110 which works out to 3045·4545 debentures. As fractional debentures cannot be issued, the company can issue only 3045 debentures. For the fractional debenture of 0·45, payment has to be made in cash. All payments in lieu of fractional shares or debentures have to be paid at market price and not to be based on paid up value. Although the agreed purchase price is Rs. 3,35,000, the real purchase price is much more than that, since the vendor company can sell the debentures at Rs. 130 each. Therefore for calculating the value of fractional debenture, market price must be the basis. Applying that cash to be paid works out to Rs. 59, (i.e.o.45×Rs. 130). So the purchase consideration would be

3045 debentures at Rs. 110 each	3,34,950
cash payment in lieu of fractional debenture	59
Total	3,35,009

Alternatively the purchase consideration may be taken as Rs. 3,35,000 in which case the first entry will be

Vendor account	Rr. 3,35,000
Goodwill account	Rs. 9
To Debenture account	3,04,500
,, Debenture premium account	30,450
,, Cash account	59

Illustration 37. (For consideration other than cash)

A company purchased assets of Rs. 4,20,000 and took over liabilities of Rs. 40,000 at an agreed value of Rs. 3,60,000. The company issued

debentures at 10% discount in full satisfaction of the purchase price. Give journal entries in the books of the purchasing company.

Solution ;

JOURNAL OF THE PURCHASING COMPANY

		Rs	Rs
Sundry assets account	Dr.	4,20,000	
To Sundry liabilities account			40,000
To Capital reserve account			20,000
To Vendor company			3,60,000
(Being the take over of assets and liabilities)			
Vendor company	Dr.	3,60,000	
Discount on debenture account	Dr.	40,000	
To Debenture account			4,00,000
(Being issue of debentures at 10% discount)			

Tutorial Notes The number of debentures has been calculated as follows:

$\frac{1}{90}$ ×Rs. 3,60,000=4,000 Debentures of Rs. 100 each at 10% discount, *i.e.*,

Debentures are of Rs. 4,00,000 and Discount is 10% of Rs 4,00,000, *i.e.*, Rs. 40,000.

(3) From "conditions of redemption" point of view. When debentures are issued with specific conditions at which redemption will be made, then the following *five* cases are possible :

Case No.	*Conditions of Issue*	*Conditions of redemption*
(*a*)	issued at par	redeemable at par
(*b*)	issued at discount	redeemable at par
(*c*)	issued at premium	redeemable at par
(*d*)	issued at par	redeemable at premium
(*e*)	issued at discount	redeemable at premium

It may be noted that in the above five cases debentures are redeemable either at par or at premium This situation is possible only when the conditions of redemption are laid down in advance. Sometimes the company redeems its debentures by purchasing them in the open market In such a case it is normally seen that the company purchases them at below par value, thus making profit on redemption. This is sometimes described as redemption of debentures at discount.

Journal entries for issue in the several cases are as follows .

When issued at par and redeemable at par

(*a*) *Debit* Bank account
Credit Debenture account

When issued at discount and redeemable at par

(*b*) *Debit* Bank account
Debit Discount account
Credit Debenture account

When issued at premium and redeemable at par

(*c*) *Debit* Bank account
Credit Debenture account
Credit Premium on issue of debenture account

When issued at par and redeemable at premium

(*d*) *Debit* Bank account
Debit Loss on issue of debentures account
Credit Debenture account
Credit Premium on redemption of debenture account (P)

When issued at discount and redeemable at premium

(*e*) *Debit* Bank account
Debit Discount account
Debit Loss on issue of debentures account
Credit Debenture account
Credit Premium on redemption of debenture account (P)

Note. Alternatively both discount and premium payable on redemption may be debited to loss on issue of debentures account in which case the entry will be :

Debit Bank account
Debit Loss on issue of debentures account
Credit Debenture account
Credit Premium on redemption of debenture account (P)

It should be carefully noted that "premium on redemption of debenture account" is a personal account because there is a liability on the part of the company to pay the debentureholders at a premium. This appears in the balance sheet on the liability side until repayment is made. Since the company promises to pay more at the time of redemption, therefore, there is a loss of the equal amount which is debited under the heading "Loss on issue of debentures account". This loss on issue of debentures account is written off gradually every year during the life of debentures. The unwritten off portion appears in the balance sheet on the assets side under the heading 'miscellaneous expenditure'.

ustration 38.

A company issued Rs. 1,00,000 7½% Debentures at par redeemable 5% premium after 10 years. Pass the necessary journal entry to record the transaction.

Solution ;

		Rs.	Rs.
Bank account	Dr.	1,00,000	
Loss on issue of debentures account	Dr.	5,000	
To Debenture account			1,00,000
To premium on redemption of debenture account			5,000

utorial Notes Loss on issue of debentures account will appear on the assets side. Premium on redemption will appear on the liabilities side of the balance sheet year after year, during the period debentures remain alive. At the time of redemption of debentures, this account is transferred to debentureholders account who, in turn, are paid off.

Illustration 39.

A company issued Rs. 1,00,000 7½% debentures at 5% discount redeemable after 10 years at a 5% premium. Pass journal entries.

Solution :

		Rs.	Rs.
Bank account	Dr.	95,000	
Loss on issue of debentures account	Dr.	10,000	
To Debenture account			1,00,000
To Premium on redemption of debenture account			5,000

Loss on issue of debentures account represents the loss on account of discount at the time of issue of debentures and loss on account of promise to pay debentures at premium at the time of their redemption.

Debenture Discount

When debentures are issued at discount, it is prudent to write off the loss during the life of debentures. When the directors of the company decide to write it off, it can be done in two ways :

First method. Under this method the total discount is spread over the life of debentures equally. Thus, if debentures are issued for 15 years, the total discount is divided by 15 and the amount so arrived at is taken to the profit and loss account every year for 15 years. This method is suitable only in one respect, that is, it spreads the burden of discount equally over the years. Thus it is good only when debentures are redeemed at the expiry of the period.

Second method. If the debentures are redeemed every year by *serving a notice** and by *drawing a lot**, the first method fails in asmuch as the burden of discount is not in the proportion of benefit received out of money collected by issuing debentures. Under these circumstances the second method is adopted. Under this method the discount is written off in the proportion of debenture debt outstanding during the year.

Illustration 40.

A Ltd. issues Rs. 1,00,000 debentures on 1st January, 1974 at a discount of 10% repayable in annual drawings of Rs. 20,000 commencing on 1st December, 1974. The company's financial year ends on 31st December. Show the account to be charged to profit and loss account for five years.

Solution :

First method. If the amount is to be written off equally every year then Rs. 2,000 (Rs. 10,000÷5 years) will be transferred to profit and loss account every year.

Second method. If the amount is to be written off *proportionately*, it will be decided as follows :

Year	*Amount used*	*Ratio*	*Amount*
1	1,00,000	5	5/15×10,000=3,333
2	80,000	4	4/15×10,000=2,667
3	60,000	3	3/15×10,000=2,000
4	40,000	2	2/15×10,000=1,333
5	20,000	1	1/15×10,000= 667
		15	Rs. 10,000

* These terms have been explained in Page 4.100.

When issued at par and redeemable at premium

(d) *Debit* Bank account
Debit Loss on issue of debentures account
Credit Debenture accouut
Credit Premium on redemption of debenture account (P)

When issued at discount and redeemable at premium

(e) *Debit* Bank account
Debit Discouut account
Debit Loss on issue of debentures account
Credit Debenture account
Credit Premium on redemption of debenture account (P)

Note. Alternatively both discount and premium payable on redemption may be debited to loss on issue of debentures account in which case the entry will be :

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Credit Premium on redemption of debenture account (P)

It should be carefully noted that "premium on redemption of debenture account" is a personal accouut because there is a liability on the part of the company to pay the debentureholders at a premium. This appears in the balance sheet on the liability side until repayment is made. Since the company promises to pay more at the time of redemption, therefore, there is a loss of the equal amount which is debited under the heading "Loss on issue of debentures account". This loss on issue of debentures account is written off gradually every year during the life of debentures. The unwritten off portion appears in the balance sheet on the assets side under the heading 'miscellaneous expenditure'.

Illustration 38.

A company issued Rs. 1,00,000 7½% Debentures at par redeemable at 5% premium after 10 years. Pass the necessary journal entry to record the transaction.

Solution ;

		Rs.	Rs.
Bank account	Dr.	1,00,000	
Loss on issue of debentures account	Dr.	5,000	
To Debenture account			1,00,000
To premium on redemption of debenture account			5,000

Tutorial Notes Loss on issue of debentures account will appear on the assets side. Premium on redemption will appear on the liabilities side of the balance sheet year after year, during the period debentures remain alive. At the time of redemption of debentures, this account is transferred to debentureholders account who, in turn, are paid off.

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Solution :

		Rs.	Rs.
Bank account	Dr.	95,000	
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Loss on issue of debentures account represents the loss on account of discount at the time of issue of debentures and loss on account of promise to pay debentures at premium at the time of their redemption.

Debenture Discount

When debentures are issued at discount, it is prudent to write off the loss during the life of debentures. When the directors of the company decide to write it off, it can be done in two ways :

First method. Under this method the total discount is spread over the life of debentures equally. Thus, if debentures are issued for 15 years, the total discount is divided by 15 and the amount so arrived at is taken to the profit and loss account every year for 15 years. This method is suitable only in one respect, that is, it spreads the burden of discount equally over the years. Thus it is good only when debentures are redeemed at the expiry of the period.

Second method. If the debentures are redeemed every year by *serving a notice** and by *drawing a lot**, the first method fails in asmuch as the burden of discount is not in the proportion of benefit received out of money collected by issuing debentures. Under these circumstances the second method is adopted. Under this method the discount is written off in the proportion of debenture debt outstanding during the year.

Illustration 40.

A Ltd. issues Rs. 1,00,000 debentures on 1st January, 1974 at a discount of 10% repayable in annual drawings of Rs. 20,000 commencing on 1st December, 1974. The company's financial year ends on 31st December. Show the account to be charged to profit and loss account for five years.

Solution :

First method. If the amount is to be written off equally every year then Rs. 2,000 (Rs. 10,000÷5 years) will be transferred to profit and loss account every year.

Second method. If the amount is to be written off *proportionately*, it will be decided as follows :

Year	*Amount used*	*Ratio*	*Amount*
1	1,00,000	5	5/15×10,000=3,333
2	80,000	4	4/15×10,000=2,667
3	60,000	3	3/15×10,000=2,000
4	40,000	2	2/15×10,000=1,333
5	20,000	1	1/15×10,000= 667
		15	Rs. 10,000

* These terms have been explained in Page 4.100.

Illustration 41. (When amount is written off proportionately)

A company issued debentures of Rs. 60,000 on 1st April, 1966. These debentures are repayable in three equal instalments of Rs. 20,000 each on 31st March every year. Calculate the amount of discount to be written off each year when the total discount on issue is Rs. 3,000. The financial year of the company ends on 31st December every year.

Year	*Amount used*	*Month for which amount used*	*Total amount (Product of 2×3)*	*Ratio*
1	2	3	4	5
1st year	60,000	9 (from April to 31st Dec.)	5,40,000	54 or 9=9/24
2nd year	60,000	3 (from January to March)	1,80,000	54 or 9=9/24
	40,000	9 (from April to 31st Dec.)	3,60,000	
3rd year	40,000	3 (from January to March)	1,20,000	30 or 5=5/24
	20,000	9 (from April to 31st Dec)	1,80,000	
4th year	20,000	3 (from January to March)	60,000	6 or 1=1/24

Discount to be written off is determined as follows :

Year 1	9/24×Rs. 3,000=	1,125
2	9/24×Rs. 3,000=	1,125
3	5/24×Rs. 3,000=	625
4	1/24×Rs. 3,000=	125
		Rs. 3,000

Interest on debentures

Interest on debentures is a charge against profit of the company and is normally payable six monthly. The company is bound to deduct income tax on the interest before making the final payment of the amount. Book keeping entries for recording the transactions are as under :

(*i*) *Entry for interest due* :

Debit Debenture interest account (with the gross amount of interest due)

Credit Income tax account (with the amount of income tax deducted)

Credit Debenture-holders account (with the amount to be paid after the deduction of income tax)

(*ii*) *Entry for the payment of amount* :

Debit Debenture-holders account

Credit Bank account

The gross amount debited to debenture interest account is transferred to the profit and loss account at the end of the year and the income-tax account is shown in the balance sheet as a liability. When income-tax is paid by the company to the Government this account is debited and cash account is credited.

Debenture interest in trial balance. The treatment of debenture interest in the final accounts should also be very carefully understood. Sometimes the trial balance shows debenture interest *paid* less tax at a specified rate. For example, if trial balance shows "half year's debenture interest *less* tax at 42% Rs. 1,450" then in the above circumstances, the profit and loss account will be debited with the gross figure of Rs. 2,500 $\left(i.e., \frac{100}{58}\times \text{Rs. } 1{,}450\right)$ and Rs. 1,050 $\left(i.e., \frac{42}{100}\times \text{Rs. } 2{,}500\right)$ will be shown in the balance sheet as liability under the heading income-tax payable account.

C—PROVISION FOR REDEMPTION OF DEBENTURES

It is always prudent for a company to save money for redeeming debentures on the due date. In the absence of such a provision it becomes difficult for the company to find lumpsum to repay the debt. This can be done by adopting any of the two methods explained below :

Sinking fund method. Under this method the amount is invested in first class securities which when allowed to accumulate with compound interest produce the amount required to redeem the debentures on the due date. This method of providing for funds is also called debenture redemption fund method. The sinking fund method for redeeming a loan is different from sinking fund method for replacing an asset* in the following ways :

1. Sinking fund created for replacing an asset is in the nature of accumulated depreciation, while sinking fund created for repaying loan is in the nature of accumulated profits It is for this reason that sinking fund's balance (after the redemption of loan) is transferred to general reserve, while that for an asset is transferred to asset account.

2. Annual instalment set aside for the replacement of an asset is a charge and is debited to profit and loss account, while that for the redemption of a loan is an appropriation and is debited to profit and loss appropriation account.

Accounting entries for making the provision for the redemption of debentures are as follows :

First year on 31st December†

1. *Debit* Profit and loss appropriation account
   Credit Sinking fund account
   (For setting aside the amount which is calculated after consulting the sinking fund table)
2. *Debit* Sinking fund inves ment account
   Credit Bank account
   (For investing the amount set aside.)

* Gupta, R.L. : *Advance Accountancy—Theory, Method and Application*, Vol. I, Ch. I.

† Or on any date when the accounting year closes.

Second and subsequent years

1. *Debit* Bank account
   Credit Interest on sinking fund investments account
   (For receiving interest on the investment made in the past year/years.)

2. *Debit* Interest on sinking fund investments account
   Credit Sinking fund account
   (For transferring interest account to sinking fund.)

Alternatively :

Debit Bank account
Credit Sinking fund account
(For the amount of interest on sinking fund investment received and transferred to sinking fund account.)

This entry has been done by combining the two journal entries.

3. *Debit* Profit and loss appropriation account
   Credit Sinking fund account
   (For setting aside the amount calculated by consulting the sinking fund table.)

4. *Debit* Sinking fund investments account
   Credit Bank account
   (For investing the amount set aside and the amount of interest received.)

Last Year :

1. *Debit* Bank account
   Credit Sinking fund interest account
   (For the receipt of interest on sinking fund investment.)

2. *Debit* Profit and loss appropriation account
   Credit Sinking fund account
   (For setting aside the amount.)

3. *Debit* Sinking fund interest account
   Credit Sinking fund account
   (For transferring interest to sinking fund.)

It may be noted that in the final year the amount appropriated from the profits of the company and the amount received as interest on sinking fund investment are not invested as the amount would be needed on the following day for the redemption of debenture. It will be helpful for students to note that in the first year of provision only *two* journal entries, in the second and all subsequent years *four* journal entries and in the final year only *three* journal entries are made.

Illustration 42.

A company issued 6% debentures of Rs. 6,00,000 with a condition that they should be redeemed after 3 years at 10% premium. The amount

set aside for the redemption of debenture is invested in 5% Government securities. The sinking fund table shows that 0 31720856 at 5% compound interest in three years will become Re. 1. You are required to give journal entries and open ledger accounts for recording the transactions for three years.

Solution :

Books of the Company
JOURNAL ENTRIES

		Rs.	Rs.
First year Jan. 1	Bank account Dr.	6,00,000	
	Loss on issue account Dr.	60,000	
	To 6% debenture account		6,00,000
	To Premium on redemption account		60,000
	(Being entry for the issue of debenture)		
First year Dec. 31	Profit and loss appropriation account Dr.	2,09,357 65	
	To Debenture sinking fund account		2,09,357 65
	(Being transfer of profit to debenture sinking fund for the redemption of debenture)		
Dec. 31	Debenture sinking fund investment account Dr.	2,09,357 65	
	To Bank account		2,09,357 65
	(Being investment of the amount set aside)		
Second year Dec. 31	Bank account	10,467 88	
	To Debenture sinking fund account		10,467 88
	(Being interest on debenture sinking fund		
Dec. 31			2,09,357 65
Dec. 31			
	To Bank account		2,19,825·53
	(Being investment of amount appropriated		
Third year Dec. 31		21,459 16	21,459·16
Dec. 31		2,09,357 66*	2,09,357 66
	(Being amount appropriated out of profits)		
	No investment will be made as this is the last year of provision		

Ledger Accounts
DEBENTURE SINKING FUND ACCOUNT

		Rs.			Rs.
1st year Dec. 31	To Balance c/d	2,09,375·65	1st year Dec. 31	By P. & L. appropriation a/c	2,09,357·65

*In the last year the amount has been increased by one paisa only in order to make up the difference created from adjustment of figures of interest to the nearest paisa.

2nd year			**2nd year**		
Dec. 31	To Balance c/d	4,29,183·18	Jan. 1	By Balance b/d	2,09,357·65
			Dec. 31	By Bank (interest)	10,467·88
			Dec. 31	By P. & L. appropriation a/c	2,09,357·65
		Rs. 4,29,183·18			Rs. 4,29,183·18
3rd year			**3rd year**		
Dec. 31	To Balance c/d	6,60,000·00	Jan. 1	By Balance b/d	4,29,183·18
			Dec. 31	By Bank (interest)	21,459·16
			Dec. 31	By P. & L. appropriation a/c	2,09,357·66
		Rs. 6,60,000·00			Rs. 6,60,000·00

DEBENTURE SINKING FUND INVESTMENT ACCOUNT

		Rs.			Rs.
1st year			**1st year**		
Dec. 31	To Bank	2,09,357·65	Dec. 31	By Balance b/d	2,09,357·65
2nd year			**2nd year**		
Jan. 1	To Balance b/d	2,09,357·65	Dec. 31	By Balance c/d	4,29,183·18
Dec. 31	To Bank	2,19,825·53			
		Rs. 4,29,183·18			Rs. 4,29,183·18
3rd year					
Jan. 1	To Balance b/d	4,29,183·18			

TUTORIAL NOTES

(1) Although the sinking fund balance stands at Rs. 6,60,000, the balance in the investment account is far less than the value of debentures to be redeemed. This is because the interest and appropriation for the last year are not inverted in view of the impending redemption. However, the amount available at the end of the 3rd year will be as follows :

	Rs.
Amount available from investments	4,29,183·18
Interest received for the 3rd year	21,459·16
Annual appropriation set aside for the 3rd year	2,09,357·66
	6,60,000·00

(2) Annual appropriation is arrived at as follows :

For obtaining Re. 1 at the end of 3 years, the amount to be invested at 5% compound interest=Rs. 0·31,720,856

For obtaining Rs. 6,60,000=6,60,000×0·31720856

=2,09,357·65

(3) In the above example the exact amount set aside has been invested while, in practice, it may happen that the amount may be invested in the securities which may be available in the multiple of Rs. 5 or Rs. 10 or Rs. 100. In case, the question states that the amount is invested in the securities of Rs 100 each, then any amount which is not making multiple of Rs. 100 either will not be invested or will be invested by adding a little more to that amount in order to make it a multiple of Rs. 100

In such circumstances, it will be seen that the balance of sinking fund investment account and sinking fund account will not exactly by the same.

Non-cumulative sinking fund. A non-cumulative sinking fund differs *from the cumulative type of sinking fund* only in one respect : in non-cumulative sinking fund, interest received on sinking fund investment is not re-invested, nor is it transferred to sinking fund. Interest on sinking fund investment is treated as a simple profit and is kept in the business without earmarking its use and the amount is transferred to profit and loss account. Nevertheless, a careful study of the two types of funds will reveal that there is no basic difference between the two methods. In a non-cumulative type of fund, the appropriation from the profits is more but the excess burden on the profits is corrected by the transfer of interest on the investment to profit and loss account. While in the case of a cumulative type of sinking fund method, the appropriation from the profit is less, but that amount is made up by crediting to sinking fund the amount of interest earned on investment. Journal entries in the case of non-cumulative sinking fund method are as follows :

SPECIMEN JOURNAL ENTRIES

		Rs.	Rs.
1st year	Profit and loss appropriation account Dr. To Sinking fund account (For appropriating the amount)		
	Sinking fund investment account Dr. To Bank account (For the investment of the amount set aside)		
2nd and subsequent years	Bank account Dr. To Interest on sinking fund investment account (For interest on investment received)		
	Interest on sinking fund investment A/c Dr. To Profit and loss account (For transferring the interest) Note : In cumulative sinking fund this interest is transferred to sinking fund account instead of profit and loss account.		
	Profit and loss appropriation account Dr To sinking fund account (For setting aside the amount)		
	Sinking fund investment account Dr. To Bank account (For investing the amount set aside) Note : In the cumulative sinking fund method these investments include the amount of interest received on investment.		

Insurance policy method. Taking an insurance policy for the required amount is another method for making a provision for the redemption of debentures at the end of a fixed period. *Under this system, the premium* is paid regularly in instalments and the insurance company, in its turn, returns the told accumulated money at the expiry of the period Money so received is used for redeeming debentures. This method differs from

the sinking fund method only in respect of *interest* on investment. Unlike sinking fund method, the insurance company does not give any interest on the instalments received but the amount of premium is proportionately reduced (taking into consideration the expected rate of interest). It follows from the above that the total premium paid is less than the total amount of policy. The difference between the amount paid in and amount received on realisation of policy represents the total amount of interest earned on premiums. Many accountants, in order to avoid the lump profit at the time of realisation, make entries for the interest every year taking into consideration the expected rate of interest. Entries in respect of insurance policy are as follows :

Debit Profit and loss appropriation account
Credit Debenture redemption fund account
(For the appropriation of amount of premium to be paid on the policy)

Debit Debenture redemption policy account
Credit Cash account
(For the payment of premium on the policy)

These entries are repeated every year, including the *last* year. Premium on the policy is always paid in advance and, therefore, it must be paid even in the last year. This is not done in simple sinking fund method. Journal entries on the realisation of policy are as follows :

Debit Bank account (amount of policy taken)
Credit Debenture redemption policy account
(with the amount at which policy account stands)
Credit Debenture redemption fund account
(with the difference in the two amounts which represents accumulated interest)

Many accountants, as said earlier, like to take into consideration the amount of interest every year. If the accounting is done from this point of view then each year journal entry for the interest is made and policy account does not show any profit at the time of realisation of policy on the completion of period. The journal entry for the interest is as follows :

Debit Debenture redemption policy account
Credit Debenture redemption fund account

In the illustration given below the interest on premiums has been considered every year.

Illustration 43.

Ramesh Ltd has made an issue of Rs. 1,00,000 5% debentures on 1st January, 1973, the terms of which include that the company must provide a sinking fund for the redemption on 31st December each year, from 1975 for 3 years. The directors decide to take out an insurance policy to provide the necessary cash, the annual premium being Rs. 31,410·80 on which the return is at 3 per cent 1 per annum at compound interest.

Show ledger accounts

Solution :

5% DEBENTURES ACCOUNT

		Rs.			Rs.
3rd year	To Bank	1,00,000	1st year	By Bank	1,00,000

DEBENTURE REDEMPTION FUND ACCOUNT

		Rs.			Rs.
1st year 31st Dec.	To Balance c/d	32,353·12	1st year 31st Dec.	By Profit and loss appropriation account	31,410·80
				By Debenture redemption policy account—3% interest on Rs. 31,410 80 for one year	942·32
		Rs. 32,353·12			Rs. 32,353·12
2nd year 31st Dec.	To Balance c/d	65,676 84	2nd year 1st Jan.	By Balance b/d	32,353·12
			31st Dec.	By profit and loss appropriation account	31,410 80
				By Debenture redemption policy account—3% interest on Rs. 63,763 92	1,912 92
		Rs. 65,676·84			Rs. 65,676·84
3rd year 31st Dec.	To General reserve	1,00,000 00	3rd year 1st Jan.	By Balance b/d	65,676·84
			31st Dec.	By P. & L appropriation account	31,410 80
				By Debenture redemption policy a/c interest at 3% on Rs. 97,087 64	2,912·36*
		Rs. 1,00,000 00			Rs. 1,00,000 00

DEBENTURE REDEMPTION POLICY ACCOUNT

		Rs.			Rs.
1st year 1st Jan.	To Cash—Premium	31,410 80	1st year 31st Dec.	By Balance b/d	32,353·12
31st Dec.	To Debenture redemption fund account—interest	942·32			
		Rs. 32,353·12			Rs. 32,353·12
2nd year 1st Jan.	To Balance b/d	32,353·12	2nd year 31st Dec.	By Balance c/d	65,676 84
1st Jan.	To Cash—premium	31,410·80			
31st Dec.	To Debenture redemption fund account—interest	1,912·92			
		Rs. 65,676 84			Rs. 65,676·84

* Actual interest as per calculation is Rs. 2,912 63 ; but it has been adjusted to get the exact amount of policy. This difference is caused due to approximations made in calculations.

Balance b/d	65,676·84	3rd year 31st Dec. By Bank	1,00,00
Cash—premium	31,410·80		
o Debenture redemption fund account—interest	2,912·36*		
	Rs. 1,00,000·00*		Rs. 1,00,000·00

D—REDEMPTION OF DEBENTURES

Redemption of debenture means to discharge the liability on account debentures. When a company proposes to redeem the liability on ount of debentures, it deals with the following three major issues : (a) iding the time of redemption ; (b) deciding the amount to be paid on demption of debenture ; and (c) mobilising the funds for the redemption debenture. The three problems relating to redemption of debenture ave been discussed as follows :

Time of redemption of debenture

Debentures are normally redeemed at the expiry of their life by giving away the amount promised for. But quite often the company reserves the right in the articles of association to redeem them even before the expiry of their life either by instalments or by purchasing them in the open market. (Company is not entitled to purchase its own shares but is entitled to purchase its own debentures.) If the company decides to redeem debentures by instalment then which debentures should be included in the first list and which in the second list is decided by *drawing a lot*. This method of redemption is sometimes called '*redemption by drawing a lot*.' If a company wants to redeem debentures before the expiry of the period and at the same time does not wish to serve notice, it can do so by purchasing them in the open market. When debentures are purchased in the open market by the company then it automatically results in the redemption of debentures as the company becomes both the claimant and the paying authority of those debentures. Thus, precisely debentures can be redeemed either : (i) at the expiry of life of debentures, or (ii) before the expiry of life of debentures by drawing a lot, or (iii) before the expiry o' life of debentures by purchasing them in the open market.

Amount to be paid on redemption

The amount to be paid on redemption is decided by the circu stances of the case. If debentures are redeemed either at the expiry life or by drawing a lot then the amount to be paid must be equal to t which was promised by the company, *i.e.*, they are paid either at pa at premium. But, if debentures are redeemed by purchasing them in open market then the price paid depends upon the market quotation it can be at par or at discount or at premium. However, debenture purchased from the open market (for the purpose of cancellation) when they are quoted below par. The company can take advant

* Actual interest as per calculation is Rs. 2,912·63 ; but it has been a to get the exact amount of policy. This difference is caused due to approxi made in calculations.

the depressed prices and redeem the debentures, instead of paying the par value on maturity.

Sources of Finance

From this point of view debentures can be redeemed : (*i*) out of profits ; (*ii*) out of capital ; (*iii*) out of provision, made for the redemption or (*iv*) by converting them into shares or new debentures.

Redemption out of profit. If debentures are redeemed out of profits it is essential that besides making the entry for redemption of debentures, entry for transfer of profit to an account called "debenture redemption reserve account" must be made. Thus, there are two entries :

(*i*) *Entry for redemption* :
Debit Debenture account
Credit Bank account

(*ii*) *Entry for transfer of profits* :
Debit Profit and loss appropriation account
Credit Debenture redemption reserve account

The debenture [illegible] sheet on the liability [illegible] debentures redeemed [illegible] when *all* the debentures are redeemed this account is closed by transferring to general reserve account. This is a free reserve and is available for all purposes. The reason for calling the above redemption "redemption out of profit" is that when the amount equal to that utilised for repayment to debentureholders is transferred from profit and loss account to a newly opened account called debenture redemption reserve account then it re- [illegible] amount avail- [illegible] -d towards [illegible] out of the [illegible] uch a pro- [illegible]

Redemption out of capital. If debentures are redeemed out of capital then only one entry for redemption is made and the second entry for the transfer of profits to debenture redemption reserve account does not appear. The effect of not transferring profits to debenture redemption reserve account is that the balance of profit and loss account is not reduced by the amount utilised for the redemption and thus sooner or later this [illegible]

Debit Debenture account
Credit Bank account

Note : In practice the amount will be transferred from debentures to an intermediate account called 'Debenture-holders account' and then the payment is shown. In such a case the entries will appear as under :

(*i*) *Entry for transfer* :
Debit Debenture account
Credit Debenture-holders account

(ii) *Entry for payment* :

Debit Debenture holders account

Credit Bank account

This method is preferable because if some debenture, holders do not receive the amount, the balance will appear in the debentureholders account and not under debentures. This should be so because once the company decides to redeem the debentures or a portion of them, it ceases to pay interest from the date of redemption, and therefore the unpaid amount must not figure under 'debenture' account. However, for the sake of economising space, this transfer entry to debentureholders account is omitted in the illustrations.

Redemption out of provision. If a company has been maintaining debenture redemption fund or debenture sinking fund, it can utilise such a fund for redeeming debentures. Following accounting entries are required.

(a) *For disposing of debenture sinking fund investments* :

Debit Bank account

Credit Debenture sinking fund investment account

(b) *For transferring profit or loss on realisation of investments*. There may be some profit or loss on the disposal of investments. Such profit or loss is transferred to debenture sinking fund. Debenture sinking fund account, being nominal account, is debited when there is a loss and credited when there is a gain. Entry is :

Debit Debenture sinking fund account

Credit Debenture sinking fund investment account

(Entry for recording a loss)

Debit Debenture sinking fund investment account

Credit Debentute sinking fund account

(Entry for recording a gain)

(c) *For recording the redemption of debenture*. It has already stated that debentures can be redeemed at or before the expiry of p by serving a notice or by purchasing them in the open market. If d tures are redeemed by serving a notice on debentureholders th amount to be paid to debentureholders would be either equal to or than the paid-up value of debentures. But in case debentures are re by purchasing them in the open market, then they can be purchas price which is less than their paid-up value. Thus, there is a possi making a profit or suffering a loss on the redemption of debenture profit or loss is transferred to debenture sinking fund account. entries for the redemption are :

(i) *Debit* Debenture account (When redeemed at

Credit Bank account

(ii) *Debit* Debenture account

Credit Bank account (When redeemed at profit, *i.e.*, a

Credit Debenture sinking fund account

(iii) *Debit* Debenture account (When redeemed at a loss, *i.e.*,

Debit Debenture sinking fund account
Credit Bank account

(*d*) *For recording the transfer of debenture sinking fund account to general reserve account.* When all debentures are redeemed then *balance* left in debenture sinking fund account is transferred to general reserve account. Entry is :

Debit Debenture sinking fund account
Credit General reserve account

This entry for the transfer is essential because in the absence of such an entry it gives a misleading picture. In principle, any specific fund appears in the balance sheet only up to that time the purpose, for which such a fund is maintained, is not fulfilled

Notes : (1) While transferring the balance of the sinking fund to general reserve, care should be taken to eliminate items of capital profits such as profit on cancellation of debentures and profit on sale of investments. The total of such items credited to sinking fund must be transferred to capital reserve and only the balance to general reserve. This is based on the logic that general reserve may be used in future for distribution of dividend and therefore it is wrong to credit it with items of capital profit.

(2) It may be carefully noted that in case only a part of debentures are redeemed then only a part of sinking fund (*equal to the paid-up value of debentures redeemed) is transferred to general reserve account. The price paid for the purchase* of debentures which may be more or less than their paid-up value shall *not* determine the amount to be transferred from sinking fund account to general reserve account.

Illustration 44.

31st December, 1977 Rs. 10,000 6% debentures were redeemed *out of capital* by drawing a lot.

31st December, 1978 Rs 15,000 6% debentures were redeemed *out of profit* by drawing a lot.

You are required to give journal entries in the books of the company.

Solution :

JOURNAL ENTRIES

			Rs.	Rs.
31st Dec. 1977	6% Debenture account	Dr.	10,000	
	To Bank account			10,000
	(Being redemption of debenture out of capital)			
31st Dec. 1978	6% Debenture account	Dr	15,000	
	To Bank account			15,000
	(Being redemption of debenture out of profit)			
	Profit and loss appropriation account	Dr.	15,000	
	To Debenture redemption reserve account*			15,000
	(Being transfer of profit to debenture *redemption reserve account)*			

* When debentures are redeemed out of profit the amount equal to the paid-up value of debentures redeemed must be transferred to an account called debenture redemption reserve account Debenture redemption reserve account, like sinking fund account, is transferred to general reserve account when all debentures are redeemed.

Illustration 45.

A company issued 1,00,000 6% debentures of Rs. 100 each at par redeemable at 10% premium. After 15 years company served notice of redemption and redeemed all debentures as per the terms of issue. You are required to give journal entries which the company will make in its books both at the time of issue of debentures and redemption of debentures.

Solution :

JOURNAL ENTRIES

			Rs.	Rs.
1st year (Beginning)	At the time of issue			
	Bank account	Dr.	1,00,00,000	
	Loss on issue of debentures account	Dr.	10,00,000	
	To Debenture account			1,00,00,000
	To Premium on redemption account			10,00,000
15th year (End)	At the time of redemption			
	Debenture account	Dr.	1,00,00,000	
	Premium on redemption account	Dr.	10,00,000	
	To Bank account			1,10,00,000

Tutorial Notes : 1. Loss on issue of debentures is a capital loss and must have been transferred to profit and loss account in some systematic way over 15 years.

2. Premium on redemption of debentures account credited at the time of issue of debentures is a *personal* account, and the liability on that account must have appeared in the balance sheet for full 15 years. It has been closed at the expiry of the period by paying in cash.

3. Since there is no indication of the existence of the sinking fund for the redemption of debentures, nor there is a transfer of the equivalent amount from the general reserve account or profit and loss account to debenture redemption reserve account this redemption of debentures is said to be a redemption *out of capital.*

Illustration 46

On 1st January 1973 debenture account showed a balance of Rs. 1,50,000 in the books of *X* Ltd. A sinking fund has been created to redeem the debentures which the trustees are empowered to utilise in cancelling the debentures by open market purchase at below par. The sinking fund stood at Rs. 48,750 on 1st January 1973, and the entire amount had been invested. During the year 1973 the trustees sold the investments and redeemed the debentures as noted below :

	Investments Cost	*Realised*	*Debentures face value*	*Cost*
	Rs.	Rs.	Rs.	Rs.
28-2-1973	18,000	17,562	18,800	17,210
30-9-1973	10,000	11,050	11,200	10,980

Interest received on 31-12-1973 was Rs. 1,070 and the annual contribution was Rs. 17,200.

Pass the necessary entries and show how the ledger accounts would appear in the books of the company. (B. Com. (Hons.) Calcutta 1974)

Solution :

JOURNAL

		Rs.	Rs.
1973 Feb. 28	Bank account Dr. [illegible] Dr. [illegible]	17,562 438	 18,000
„	Debentures account (*A*) Dr. To Bank account To Sinking fund account (Being the redemption of debentures by purchase from open market and the profit thereon transferred to sinking fund account)	18,800	 17,210 1,590
		Rs.	Rs
Sept. 30	Bank account Dr. To Sinking fund investment A/c (Being the sale of investments)	11,050	 11,050
„	Sinking fund investment a/c Dr. To Sinking fund account (Being transfer of profit on sale of investments to sinking fund)	1,050	 1,050
„	Debentures account Dr. To Bank account To Sinking fund account (Being the redemption of debentures by purchase from the open market and the profit thereon transferred to sinking fund account)	11,200	 10,980 220
Dec. 31	Bank account Dr. To sinking fund account (Being the interest on sinking fund investments)	1,070	 1,070
„	Profit and loss appropriation account Dr. [illegible] sinking [illegible]	17,200	 17,200
„	Sinking fund account (*B*) Dr. To General reserve (Being transfer of sinking fund to general reserve on redemption of debentures, the amount being equal to paid up value of debentures cancelled).	30,000	 30,000

(*A*) Profit on redemption of debentures can first be credited to an account styled 'profit on purchase of debentures account' and then transferred to sinking fund account in which case the entries will appear as under :

Debit Debentures account
  Credit Bank account
  Credit Profit on purchase of debentures account

Debit Profit on purchase of debentures account
  Credit Sinking fund account

(*B*) Whenever redemption takes place in piecemeal and debenture sinking fund is maintained, it is essential to transfer the amount equivalent to the paid up value of debentures redeemed from the sinking fund to the general reserve. These tranfers are usually made at the end of the accounting year. It is also not wrong to make the transfers then and there, in which case Rs. 18,800 must be transferred on 28-2-1973 and Rs. 11,200 must be transferred on 30-9-1973.

LEDGER ACCOUNTS

DEBENTURE ACCOUNT

Date	Particulars	Rs	Date	Particulars	Rs.
1973			1973		
Feb. 28	To Bank	17,210	Jan. 1	By Balance b/d	1,50,000
,,	To Sinking fund (profit on purchase)	1,590			
Sept. 30	To Bank	10,980			
,,	To Sinking fund (profit on purchase)	220			
Dec. 31	To Balance c/d	1,20,000			
	Rs.	1,50,000		Rs.	1,50,000
			1974		
			Jan. 1	By Balance b/d	Rs. 1,20,000

SINKING FUND ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1973			1973		
Feb. 28	To Sinking fund investment a/c (loss on sale of investment)	438	Jan. 1	By Balance b/d	48,750
Dec. 31	To General reserve —transfer	30,000	Feb. 28	By Debenture a/c (profit on purchase)	1,590
,,	To Balance c/d	39,442	Sept. 30	By Debenture a/c (profit on purchase)	220
			,,	By Sinking fund investment a/c (profit on sale of investments)	1,050
			Dec. 31	By Bank a/c (interest)	1,070
			,,	By profit and loss appropriation account (annual contribution)	17,200
	Rs.	69,880		Rs.	69,880
			1974		
			Jan. 1	By Balance b/d	39,442

SINKING FUND INVESTMENT ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1973			1978		
Jan. 1	To Balance b/d	48,750	Feb. 28	By Bank—sale proceeds	17,562
Sept. 30	To Sinking fund a/c (profit on sale of investments)	1,050	,,	By Sinking fund a/c (loss on sale of investments)	438
			Sept. 30	By Bank—sale proceeds	11,050
			Dec. 31	By Balance c/d	20,750
	Rs.	49,800		Rs.	49,800
1974					
Jan. 1	To Balance b/d	20,750			

Redemption by conversion. In some cases, debentures are redeemed by converting them into new class of shares or deben-

that the offer is beneficial to them they can exercise their right of converting their debentures into a new class of shares or debentures. An option for converting their holdings into new class of shares gives debenture-holders a privilege inasmuch as they kept themselves as secured creditors at the time when the company was in its infancy and now enjoy the right *of becoming the proprietors of the company when its solvency and* managerical efficiency are assured. These new shares or debentures can be issued at par, at premium, or at discount. Journal entry is as under :

Debit Old debentures account

Credit New shares or debentures account

In case new shares or debentures are issued at premium, premium account is credited and in case they are issued at discount, discount account is debited.

Illustration 47. On 1st January, 1965, a limited company issued Rs. 2,00,000 5% debentures of Rs. 1,000 each at par repayable at 5% premium. As per terms of issue, the debentureholders had an option to convert their holdings into 6% preference shares of Rs. 100 each at a premium of 20% at any time after 3 years.

On 31st December, 1967, a holder of 40 debentures gave a notice of exercising the option.

Interest on debentures for full one year had accrued and remained unpaid until 31st December, 1967. Interest for the past two years had been paid as and when due.

Pass necessary journal entries and show how these items will appear in the new balance sheet.

Solution :

JOURNAL OF THE COMPANY

			Rs.	Rs.
1965 Jan. 1	Bank account	Dr.	2,00,000	
	Loss on issue account	Dr.	10,000	
	To Debenture account			2,00,
	To Premium on redemption account			10,
	(Being issue of 200 debentures of Rs. 1,000 each at par, repayable at 5% premium)			
1967 Dec. 31	Debenture interest account	Dr.	10,000	
	To Debenture interest outstanding account			[illegible]
	(Being one year's interest due on debentures)			
Dec. 31	Debenture account	Dr.	40,000	
	Premium on redemption account	Dr.	2,000	
	[illegible]			[illegible]
	[illegible]			[illegible]

BALANCE SHEET

	Rs.		Rs.
350 6% preference share capital of Rs. 100 each fully paid up	35,000	*Miscellaneous expenditure :*	
		Loss on issue	10,000
Reserves and surplus :			
Share premium account	7,000		
Secured loans			
160 5% Debentures of Rs 1,000 each	1,60,000		
Interest accrued and due	10,000		
Premium on redemption	8,000		

Tutorial Notes: 1. It has has been assumed that loss on issue has not been written off. If it had been, then only unwritten off portion of the account would have appeared in the balance sheet.

2. Interest outstanding will disappear as soon as it is paid out.

3. No right of converting the unpaid interest into shares is given to the debentureholders unless it is mentioned specifically,

Own Debentures

Earlier in this chapter a reference to purchase of debentures in the open market has been made. It was stated that the directors of a company, if authorised by the terms of contract, can purchase debentures when they find that the market price is favourable to the company. If debentures are so purchased then it can serve one of the following two purposes—(*a*) debentures so purchased may be cancelled (this has already been done on page 4.102), or (*b*) debentures so purchased may be kept as investment and may be utilised for re-issue when needed afterwards. At this stage the accounting treatment of the debentures purchased as an investment (hereinafter called "own debentures") is taken up.

When company's own debentures are purchased by the company as investments, then the accounting treatment of the purchase of debentures is the same as that adopted for the purchase of ordinary investments. Accounting entry is as under :

Debit Investment account

Credit Bank account

(Being investment in company's own debentures)

Sometimes, as an alternative solution (this method is rather more popular) the following entry is given :

Debit Own debentures account

Credit Bank account

"Investment in own debentures" or simply "own debentures" appears on the assets side of the balance sheet. Debentures continue to appear on the liability side at the figure appearing in the books before the purchase of debentures in the open market. It ...

ebentures have been purchased immediately after the payment of interest. The question of purchase of debentures on any date other than the date of interest has been discussed under the next heading "Ex and Cum-interest Quotations" on page 4·112.

When the company wants to cancel the investment in 'own debentures' the following journal entry is done :

Debit Debentures account	(with the paid-up value)
Credit Own debentures account	(with the value appearing in the balance sheet)

The difference between the two values represents profit or loss on cancellation and is credited/debited, as the case may be, to debenture sinking fund account or capital reserve account.

Illustration 48. The balance sheet of *X* Ltd as on 31st December, 1969, disclosed the following information :

	Rs.
(*a*) 7% Debentures	4,00,000
(*b*) Debenture sinking fund	1,70,000

(*c*) Debenture sinking fund investment represented by Rs. 40,000 own debentures purchased at 98 and the remaining amount by Rs. 1,40,000 4% stock.

On the above date the directors redeemed all the debentures. For this purpose, they realised 4% stock at par. They utilised Rs. 60,000 for redemption out of current year's profits. You are required to give journal entries.

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1969			Rs.	Rs.
Dec. 31	Bank account To Debenture redemption fund investment account (Being sale of investment for the redemption of debentures)	Dr.	1,40,000	1,40,000
Dec. 31	Debenture account To Bank account (Being redemption of outstanding debentures at par)	Dr.	3,60,000	3,60,000
Dec. 31	Debenture redemption fund investment account To Debenture sinking fund account (1) (Being profit on sale of investment transferred to debenture sinking fund)	Dr.	[illegible]	[illegible]
Dec. 31	Debenture account To Own debentures account To Debenture sinking fund account (Being profit on cancellation of own debentures transferred to debenture sinking fund)	Dr.	[illegible]	[illegible]
Dec. 31	Debenture sinking fund account To General reserve account To Capital reserve account (Being the transfer of balance in the sinking fund to general and capital reserves)	Dr.	[illegible]	[illegible]
Dec. 31	Profit and loss appropriation account Dr. To General reserve account (Being transfer of Rs. 60,000 from ... general reserve)			

Tutorial Notes : (1) Profit on sale of investment is arrived at as under:

Total amount available for investment	1,70,000
Less Amount used in purchasing own debentures Rs. 40,000 at 98	39,200
Amount invested in 4% Rs. 1,40,000 stock, *i.e.*, cost price of stock	1,30,800
Sale price of 4% stock at par	1,40,000
Profit on sale of stock	Rs. 9,200

(2) In order to justify the redemption out of profit, it is necessary to transfer the equivalent amount from profit to general reserve or debenture redemption reserve account. In the absence of such a transfer, the above redemption would have been said to be as "out of capital".

Illustration 49. *X* Ltd has an authorised capital of Rs. 15,00,000 divided into equity shares of Rs. 10 each and its balance sheet as on 31st December 1975 was as follows :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Fixed assets	12,00,000
Issued and fully paid up	5,00,000	Current assets	4,20,000
Capital reserve	1,20,000	Investments in own	
General reserve	2,00,000	debentures	85,000
Profit and loss account	3,50,000	(nominal value Rs. 1,00,000)	
6% Debentures	4,00,000	Cash at bank	75,000
Sundry creditors	2,10,000		
Rs.	17,80,000	Rs.	17,80,000

The 6% debentures were due for payment on 30th June 1976 at a premium of 5%.

The company decided :

(*i*) To issue to the public 25,000 equity shares of Rs. 10 each at Rs. 15 per share. The money was duly received.

(*ii*) To redeem out of profits the debentures on 30th June 1976 together with interest for 6 months.

(*iii*) To give the debenture-holders an option to receive either cash in repayment of the amount due or new 6% debentures 1985 at par. The holders of Rs. 1 lakh of the old debentures accepted new debentures. The debentures which the company held as investment were cancelled.

You are required to pass necessary journal entries giving effect to the above transactions.

(B. Com. (Hons.) Calcutta, 1975)

Solution ;

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			Rs.	Rs.
1976 June 30	Bank account	Dr.	3,75,000	
	To Equity share capital A/c			2,50,000
	To Share premium account			1,25,000
	(Being the issue of 25,000 equity shares of Rs. 10 each at a premium of 50%)			

"	6% Debentpres (old) account Dr. To Own debentures account To profit on cancellation of debentures account (Being the cancellation of own debentures and profit thereon)	1,00,000		85,000 15,000
"	6% Debentures account Dr. Premium on redemption of debentures account Dr. To Debentureholders account (Being the transfer of amount due on redemption including premium)	3,00,000 15,000		3,15,000
"	Debenture interest account Dr. To Debertureholders account To Profit and loss account (Being the 6 months interest on debentures of which Rs. 3,000 is on own debentures).	12,000		9,000 3,000
"	.. Dr. . "	1,08,000		1,08,000
"	Debentureholders account Dr. To Bank account (Being the payment to debentureholders holding Rs 2 lakhs of debentures including premium and interest thereon)	2,16,000		2,160,00
"	Profit on cancellation of debentures account Dr. To Premium on redemption of debenture account (Being the set off of premium on redemption against profit on cancellation of debentures)	15,000		15,000
"	Profit and loss account (3) Dr. To Debenture redemption reserve a/c (Being the transfer of profit to debenture redemption reserve account)	2,00,000		2,00,000

Tutorial Notes: 1. Premium on redemption account is a nominal account, as the same has not been provided for at the time of issue of debentures This loss has been set off against profit on cancellation of debentures.

2. Interest on own debentures is to be credited to the sinking fund, As the investment is not made with the help of sinking fund, the same is credited to profit and loss account.

3. The amount transferred to debenture redemption account is arrived at as follows :

	Rs.	Rs.
Nominal value of debentures redeemed		4,00,000
Less Own debentures cancelled	1,00,000	
Debentures holders opting for		
Debenture holders opting for conversion to new debentures	1,00,000	

Redemption from out of profits

Interest on own debentures

In may be noted at the outset that whenever company holds its "own debentures" as investment, the total debentures (including those which are held by the company) are deemed to be outstanding. Therefore, interest becomes payable on the whole amouut of debentures including those held by the company as an investment. However, the amount actually paid will be the interest payable on debentures held by outsiders. The portion of interest due on own debentures will be credited to 'Interest on own debentures account.' The resulting entry will be :

Debit Debenture interest A/c (on the whole of debentures)

Credit Bank account (payable to outsiders)

Credit Interest on own debentures account (due to the company)

When sinking fund does not exist. The debit balance of interest on debenture account (shown in the first journal entry) appears on the debit side of profit and loss account and the credit balance of interest earned account or interest on own debentures account (shown in the second entry) appears on the credit side of profit and loss account. This type of presentation gives a good opportunity to the directors of the company to make comparisons between expense and income on that account.

When sinking fund exists. The procedure suggested above is changed a little when sinking fund exists. The only point to be noted in this case is that *interest earned on own debentures is transferred to sinking fund account instead of profit and loss account.*

E—EX-INTEREST AND CUM-INTEREST QUOTATIONS

Sometimes debentures are purchased in the open market on a date other than the date of declaration of interest. In such a case distinction must be made between the capital and revenue portion of the price paid for the debentures. Amount paid towards the cost of debentures constitutes the capital portion. Amount paid towards interest from the last date of interest payment to the date of purchase constitutes the revenue portion. Again the price paid for the debentures depends on the quotation. If the quotation is cum-interest, the price quoted includes the interest for the expired period. On the other hand in the case of ex interest quotation, the latter does not include the interest and therefore the buyer has to pay in addition, the interest for the expired period.

At the time of recording the purchase of 'own debentures' only the price paid for them (capital portion) must be debited to the account. Amount paid by way of interest (revenue portion) must be debited to interest account.

Therefore for the same quotation, if it is ex-interest, the buyer has to pay higher amount than under cum-initerest as is clear from the following illustration. At the time own debentures are cancelled, it naturally follows that profit on cancellation will be more in the case of cum-interest rather than ex-interest quotation. The above explanation is according to the stock exchange practice prevailing in India. In England, under an ex-interest quotation the seller will be receiving the interest for the full period of six months, even though he has sold the security. In other words, the buyer in addition to what he has paid towards the cost of debentures will be losing the interest from the date of transaction to the date of next interest payment.

Illustration 50.

X Ltd. buys its own 6% debentures of the nominal value Rs. 20,000 at Rs. 96 on 31st March 1978. Record the transaction in the books of *X* Ltd. if the quotation is (1) cum-interest and (2) ex-interest. *X* Ltd. pays debenture interest half-yearly on 30th June and 31st December.

Solution :

JOURNAL

			Rs.	
1978 Mar. 31	Cum-interest			
	Own debentures account	Dr.	18,900	
	Interest account	Dr.	300	
	To Bank account			19,200
	(Being the purchase of company's own debentures at 96 cum-interest)			
"	Ex-interest			
	Own debentures account	Dr.	19,200	
	Interest account	Dr.	300	
	To Bank account			19,500
	(Being the purchase of company's own debentures at Rs. 96 ex-interest			

TUTORIAL NOTES

(1) Cum-interest.

		Rs.	
Total price paid at Rs. 96 for Rs. 20,000.		19,200	
Less : Interest on Rs. 20,000 at 6% for three months *i.e.* from 1st January 1978 to 31st March 1978		300	(Revenue)
Price paid for debenture alone	Rs.	18,900	(Capital)

(2) Ex-Interest

		Rs.	
Price paid for debentures alone at Rs. 96 for Rs. 20,000		19,200	(Capital)
Add : Interest for the expired period namely from 1st January 78 to 31st March 1978		300	(Revenue)
Total price paid	Rs.	19,500	

Own debentures may be cancelled immediately or carried as an investment for some time and cancelled on a subsequent date. Occasionally they may be reissued (without cancellation) which means they are resold. When debentures are cancelled, interest ceases to be payable on such debentures. Therefore, the date of cancellation is material to determine the interest payaole on debe [illegible] cancelled immediately after [illegible] debentures and also recei [illegible] At the time of cancellation whether immediately or on a subsequent date debenture account is debited with the actual paid-up value of debentures redeemed and own debentures are credited with the amount standing in the books (*i e.*, fair value) The difference between the two amounts is a profit or a loss and is transferred to profit and loss account—if no debenture sinking fund is maintained, to debenture sinking fund account if debenture sinking fund is maintained.

Illustration 51. *X* Ltd. cancels the debentures purchased on 31st March 1978 (Ref: illustration 50). Record the entries for cancellation when

Solution :

JOURNAL

			Rs.	
1978 Mar. 31	(1) in the case of purchase on cum-interest basis 6% Debentures account To Own debentures account To Profit on cancellation account (Being the entry for cancellation of own debentures and the profit thereon)	Dr.	20,000	 18,900 1,100
	(2) in the case of purchase on ex-interest basis 6% Debentures account To Own debentures account To Profit on cancellation account (Being the entry for cancellation of own debentures and the profit thereon)	Dr.	20,000	 19,200 800

From the illustrations 50 and 51, it can be seen that for the same price quotation, price paid will be more in the case of ex-interest quotation and profit on cancellation will be more in the case of cum-interest quotation. It may also be noted that the above entries will remain unchanged even if the cancellation is on a subsequent date. However, one has to pass the entries for debenture interest and interest on own debentures for the intervening period. How this is done is explained in following illustration.

Illustration 52. Sure Ltd. made an issue of 1,000 6% debentures of Rs. 1,000 each on 1-1-1971 at the issue price of Rs. 960. The terms of issue provided that beginning with 1973, Rs. 40,000 debentures should be redeemed either by purchase in the market or by lot at par. The expenses of the issue amounted to Rs. 8,000 which were written off in 1971. In 1972 and 1973, the discount on issue of debentures was written off equally.

In 1973, the company purchased Rs. 12,000 debentures at Rs. 940 cum-interest on 30th September and Rs. 20,000 debentures at Rs. 950 ex-interest on 30th November, the expenses being Rs. 800. On 31st December the debentures necessarily to be redeemed were paid off at par by drawings by lot. Assuming the interest is payable on 30th June and 31st December, make journal entries to record the above transaction.

(B. Com., Madras, September 1975)

Solution :

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			Rs.	Rs.
1971 Jan. 1	Bank account Discount on debentures account To 6% Debenture account (Being the issue of 1,000 6% debentures of Rs. 1,000 each at Rs. 960)	Dr. Dr.	9,60,000 40,000	 10,00,000
"	Debenture issue expenses account To Bank account (Being the expenses incurred on the issue of debentures)	Dr.	8,000	 8,000
June 30	Debenture interest account To Bank account (Being the payment of half yearly interest at 6% p.a. on Rs. 10,00,000)	Dr.	30,000	 30,000

			Rs.	Rs.
Dec. 31	Debenture interest account	Dr.	30,000	
	To Bank account			30,000
	(Being the payment of half-yearly interest)			
,,	Profit and loss account	Dr.	68,000	
	To Debenture interest account			60,000
	To Debenture issue expenses account			8,000
	(Being the transfer of debenture interest and writing off of issue expenses)			
1972 June 30	Debenture interest account	Dr.	30,000	
	To Bank account			30,000
	(Being payment of half-yearly interest)			
Dec. 31	Debenture interest account	Dr.	30,000	
	To Bank account			30,000
	(Being the payment of half-yearly interest)			
,,	Profit and loss account	Dr.	80,000	
	To Debenture interest account			60,000
	To Discount on debentures account			20,000
	(Being the transfer of debenture interest and writing off of half of discount account)			
1973 June 30	Debenture interest account	Dr.	30,000	
	To Bank account			30,000
	(Being the payment of half-yearly interest)			
Sept. 30	Own debentures account (1)	Dr.	11,100	
	Debenture interest account	Dr.	180	
	To Bank account			11,280
	(Being the purchase of company own debentures at Rs 940 cum-interest)			
Nov. 30	Own debentures account	Dr.	19,800	
	Debenture interest account	Dr.	500	
	[illegible]			20,300
Dec. 31	6% Debenture account	Dr.	40,000	
	To Own debenture account			30,900
	To Profit on cancellation			1,100
	To Bank account			8,000
	(Being the redemption of debentures of the nominal value Rs 40,000 of which Rs 8,000 were redeemed by annual drawings)			
,,	Debenture interest account (3)	Dr.	29,320	
	To Bank account			29,040
	To Interest on own debenture account			[illegible]
	(Being the half-yearly interest on debenture of which Rs 280 is receivable on own debentures)			
,,	Profit and loss account	Dr.	78,220	
	Profit on cancellation account	Dr.	1,100	
	To Debenture interest account			
	To Discount on debenture account			
	(Being the transfer of debenture interest and writing off of remaining discount)			
,,	Interest on own debenture account (4)	Dr.	280	
	To Profit and loss account			
	(Being the transfer of interest on own debentures)			

UTORIAL NOTES (1) The amount debited to own debentures on 30th September, 1973 is calculated as follows :

	Rs.
Price paid for 12 debenture at Rs. 940 each	11,280
Less interest on Rs. 12,000 for 3 months at 6%	180
Amount paid towards cost of debentures	11,100

(2) Amount credited to bank on 30th November, 1973 is calculated as follows :

		Rs.
Cost of 20 debenture at Rs. 950 ex-interest		19,000
Expenses of purchase		800
	Total cost	19,800
Interest on Rs. 20,000 for 5 months at 6%		500
	Total amount paid	20,300

In the absence of details, expenses of purchase are presumed to be in respect of debentures purchased on 30th November. Otherwise a portion of the expenses must be debited to own debenture account on 30th September.

(3) Debenture interest on 31st December, 1973 is calculated as follows :

		Rs.
Interest for the half yearly ending 31st December		30,000
Less : Interest already debited at the time of purchasing own debenture	Rs.	
30th September	180	
30th November	500	
		680
Balance of interest debited on 31st December		29,320

(4) Interest on own debentures is calculated as follows :

	Rs.
On Rs. 12,000 for 3 months, *i.e.*, from 1st October to 31st December	180
On Rs. 20,000 for 1 month, *i.e.*, from 1st December to 31st December	100
Total Rs.	280

(5) Profit on cancellation is utilised to write off discount on debentures account.

F—EXAMINATION PROBLEMS

Illustration 53. The debenture redemption fund of Export Industries Ltd stood at Rs. 16,000, represented by Rs. 20,000 (nominal) investments. The debentures stood in the books at Rs. 50,000 and the company sold Rs. 12,000 (nominal) investments at Rs. 84 for the purpose of redeeming Rs. 10,000 debentures at a premium of 1 per cent. You are required to show the ledger accounts to record the above transactions. (Ignore interest and brokerage.)

(I.C.W.A. 1966)

Solution :

DEBENTURE REDEMPTION FUND ACCOUNT

	Rs.		Rs.
To General reserve	10,000	By Balance b/d	16,000
To Premium on redemption of debentures account	100	By debenture redemption fund investment account	480
To Balance c/d	6,380		
Rs.	16,480	Rs.	16,480

DEBENTURE REDEMPTION FUND INVESTMENT ACCOUNT

	Nominal value Rs	Cost Rs.		Nominal value Rs.	Cost Rs.
To Balance b/d	20,000	16,000	By Bank	12,000	10,080
To Debenture redemption fund account—profit on sale (balancing figure)		480	By Balance c/d	8,000	6,400*
	20,000	16,480	Rs	20,000	16,480

PREMIUM ON REDEMPTION OF DEBENTURE ACCOUNT

	Rs.		Rs.
To Debentureholders account	100	By Debenture redemption fund account	100

DEBENTUREHOLDERS ACCOUNT

	Rs.		Rs.
To Bank account	10,100	By Debenture account	10,000
		By Premium on redemption of debenture account	100
Rs.	10,100	Rs.	10,100

DEBENTURE ACCOUNT

	Rs.		Rs.
To Debentureholders account	10,000	By Balance b/d	50,000
To Balance c/d	40,000		
Rs.	50,000	Rs.	50,000

BANK ACCOUNT

	Rs		Rs.
To Balance	?	By Debentureholders account	10,100
To Debenture redemption fund investment account	10,080		

* 16,000/20,000 × Rs. 8,000 = Rs. 6,400

Illustration 54. A company gave notice of its intention to redeem its outstanding Rs. 4,00,000 6% debenture stock at Rs. 102 per cent, and offered the holders the following options to apply the redemption moneys to subscribe for : (*a*) 5% cumulative preference shares of Rs. 20 each at Rs. 22·50

per share, (*b*) 6% Debenture stock at 96 per cent, (*c*) to have their holdings redeemed for cash.

Holders of Rs. 1,71,000 stock accepted the proposal (*a*). Holders of Rs. 1,44,000 stock accepted the proporsal (*b*). And the remaining stockholders accepted the proposal (*c*). Pass journal entries to record the above transactions. (Indian Institute of Bankers I, 1971)

Solution :

JOURNAL ENTRIES

			Rs.	Rs.
	Option (*a*) :			
(*i*)	6% Debenture stock account	Dr.	1,71,000	
	Premium on redemption account	Dr.	3,420	
	To Debentureholders account			1,74,420
	[Amount due to debentureholders offering for option (*a*)]			
(*ii*)	Debentureholders account	Dr.	1,74,420	
	To 5% Cumulative preference share capital account			1,55,040
	To Share premium account			19,380
	(Issue of 7,752 cumulative preference shares for Rs. 20 at Rs. 22·50)			
	Option (*b*)			
(*i*)	6% Debenture stock account	Dr.	1,44,000	
	Premium on redemption account	Dr.	2,880	
	To Debentureholders account			1,46,880
	[Amount due to debentureholders offering of option (*b*)]			
(*ii*)	Debentureholders account	Dr.	1,46,880	
	Discount on (new) 6% debenture stock account	Dr.	6,120	
	To (New) 6% debenture stock account			1,53,000
	(Issue of 1,530 6% debenture stock (new) of Rs. 100 each at 96)			
	Option (*c*)			
(*i*)	6% Debenture stock account	Dr.	85,000	
	Premium on redemption account	Dr.	1,700	
	To Debentureholders account			86,700
	[Amount due to debentureholders offering for option (*c*)]			
(*ii*)	Debentureholders account	Dr.	86,700	
	To Bank account			86,700
	(Payment of amount due to debentureholders)			
(*iii*)	Profit and loss appropriation account	Dr.	85,000	
	To General reserve account			85,000
	(Transfer of profit to general reserve account)			
	Entry to transferring premium on redemption of debentures :			
	Profit and loss account	Dr.	8,000	
	To Premium on redemption of debenture account			8,000
	(Loss on the redemption of debentures transferred to profit and loss account)			

Tutorial Notes 1. In the absence of any information regarding the period of the issue of new 6% debentures, discount has not been written off to profit and loss account.

2. Redemption of debentures in first two cases was by conversion into new shares and debentures and hence the company was not required to part with its bank balance. It is only in the third case, the debentureholders have been paid out in cash. In this case, it is necessary to transfer the amount equal to the face value of debentures redeemed from profit and loss appropriation account to general reserve account (sometimes to debenture redemption account or capital reserve account). This will enable the company to redeem debentures out of profit. In the absence of such a transfer, the redemption will be out of capital which is not a sound policy.

Illustration 55. In 1954 Ashish Limited issued Rs. 20,00,000, 6% debentures at par which were redeemable at Rs. 104 on 30th June 1965. Annual appropriation has been made out of profits to a sinking fund set up under the terms of debenture trust deed. The amount so set apart was invested on 30th June every year together with the income from sinking fund investment received during each year. The trustees have power to purchase, for immediate cancellation, any debenture available at a market price below par, and to realise investments of the sinking fund for this purpose.

The following balances appeared in company's books on 1st July 1964 : (*i*) Sinking fund account at Rs 11,74,900 represented by investments of an equal amount : (*ii*) 6% debentures at Rs 12,00,000.

The undermentioned transactions took place during the year ended 30th June 1965 : (*a*) Half year's interest on debentures was paid on 31st December 1964. (*b*) Invesments costing Rs. 97,500 were sold and realised at Rs. 1,05,000 on 1st January, 1965. On the same date Rs 1,00,000 debentures were purchased at Rs 97 (including expenses) on the market and cancelled. (*c*) Remaining investments were sold and proceeds amount- [illegible] 1965 (*d*) Interest of Rs. [illegible] 1965 but was not invested [illegible] pending debenture red- [illegible] were redeemed together with half-year's interest thereon.

Prepare the following ledger accounts for the year ended 30th June 1965 :

(1) 6% debentures. (2) Sinking fund investments. (3) Sinking fund. (4) Debenture interest. (B. Com., Bombay, 1967)

Solution :

Ledger of M/s. Ashish Ltd.

6% DEBENTURES ACCOUNT

		Rs.			Rs.
1965			1964		
Jan. 1	To Bank account	97,000	July 1	By Balance b/d	12,00,000
	,, To Sinking fund account —profit transferred	3,000	1965		
Jun 30	To Bank account	11,44,000	June 30	By Sinking fund account—premium on redemption on debentures transferred (1)	44,000
		Rs. 12,44,000			Rs. 12,44,000

SINKING FUND INVESTMENT ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1964			1965		
July 1	To Balance b/d	11,74,900	Jan. 1	By Bank account	1,05,000
1965					
Jan. 1	To Sinking fund account —profit on sale of investments transferred	7,500	Jun. 29	By Bank account	11,10,000
June 29	To Sinking fund account —profit on sale of investments transferred (2)	32,600			
		Rs. 12,15,000			Rs. 12,15,000

SINKING FUND ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1965			1964		
June 30	To 6% debentures account (1)	44,000	July 1	By Balance b/d	11,74,900
			1965		
,,	To Capital reserve account	43,100	Jan. 1	By Sinking fund investments account	7,500
,,	To General rsserve account —balance transferred	12,00,400	Jan. 1	By 6% debentures account	3,000
			June 28	By Bank account —interest received	69,500
			29	By Sinking fund investments account	32,600
		Rs. 12,87,500			Rs. 12,87,500

DEBENTURE INTEREST ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1964			1965		
Dec, 31	To Bank—6% on Rs. 12,00,000	36,000	June 30	By Profit and loss a/c	69,000
Jun. 30	To Bank—6% on Rs. 11,00,000	33,000			
		Rs. 69,000			Rs. 69,000

TUTORIAL NOTES

(1) Balance in debentures a/c as on 1-7-64 — 12,00,000
Less : Debentures redeemed on 1-1-65 — 1.00,000

Balance redeemed on 29-6-65 at a Premium of Rs. 4 per debenture — 11,00,000

Premium on redemption $\frac{\text{Rs. } 11,00,000}{\text{Rs. } 100} \times \text{Rs. } 4 = \text{Rs. } 44,000$

(2) Balance in S.F. Investment A/c — 11,74,900
Less ; Invetsment sold on 1-1-65 — 97,500

Balance sold on 29-6-65 — 10,77,400
Sale Proceeds — 11,10,000

Profit on sale — 32,600

Illustration 56. On 30th September, 1970 the following balances stood in the books of Sidney Poitier Ltd. :

	Rs.		Rs.
7% Second mortgage debenture stock	4,00,000	*Sinking fund Investments :* Rs. 80,000, 5 per cent State Development Loans	76,000
Income received on sinking fund investments	14,500	Rs. 90,000, 6 per cent National Defence Bonds	1,00,000
Discount on issue of debentures	25,000	Rs. 70,000, 7 per cent Plan Progress Loans	70,000
Sinking fund	3,65,500	Rs. 1,80,000 7½ per cent Central Securities	1,85,000

On the same day the investments were sold : the 5 per cent State Development Loans at 90, the 6 per cent National Defence Bonds at par, the 7 per cent Plan Progress Loans at 115 and the 7½ per cent Central Securities at 120. On 1st October, 1970, the debentures of Rs. 3,00,000 were redeemed at a premium of 2½ per cent. On the very same day 8 per cent Moon Landing Loans of Rs. 1,00,000 were purchased at a premium of 3 per cent. Annual contribution for redemption was Rs. 50,000. Ignore interest.

Prepare the following accounts : (*a*) Debenture stock ; (*b*) Sinking fund ; (*c*) Sinking fund investments ; (*d*) General reserve.

(B. Com . Bombay. 1971)

Solution : Ledger of M/s. Sidney Poitier Ltd.

7% SECOND MORTGAGE DEBENTURE STOCK ACCOUNT

	Rs.		Rs.
To Bank account	3,00,000	By Balance b/d	4,00,000
To Balance c/d	1,00,000		
	Rs. 4,00,000		Rs. 4,00,000

SINKING FUND ACCOUNT

	Rs.		Rs.
To General reserve (on redemption of debentures)	3,00,000	By Balance b/d	3,65,500
To Premium on redemption of debentures account	7,500	By Sinking fund investments account (profit on sale)	27,500
To Discount on issue of debentures (3/4×25,000) (1)	18,750	By Interest on sinking fund investments account	14,500
To Balance c/d	1,31,250	By Profit and loss appropriation account	50,000
	Rs. 4,57,500		Rs. 4,57,500

SINKING FUND INVESTMENTS ACCOUNT

	Rs.			Rs.
To Balance b/d	4,31,000	By Bank account :		
To Sinking fund account—profit on sale of investments (balancing figure)	27,500	5% State Dev Loans	72,000	
To Bank account—8% Moon Landing Loans	1,03,000	6% National Defence Bonds	90,000	
		7% Plan Progress Loans	80,500	
		7½% Central Securities	2,16,000	
		By Balance c/d		

TUTORIAL NOTES

(1) Alternatively it can be changed to profit and loss account of the year. Since 3/4ths of debentures have been redeemed, 3/4ths of the debenture-discount has been written off.

GENERAL RESERVE ACCOUNT

	Rs.		Rs.
To Balance c/d	3,00,000	Sinking fund account	3,00,000
	Rs. 3,00,000		Rs. 3,00,000

Illustration 57. Affluence Ltd. had issued 7% debentures of the par value of Rs. 50,00,000 divided into 5,000 debentures of Rs. 1,000 each redeemable at any time by the company after giving three months' notice. Under the terms of issue the company had the power to purchase in the open market its own debentures and either resell them or cancel them. On January 1, 1978 the following were the balances in the relevant accounts in the books of the company :

	Rs.		Rs.
Debenture issued	48,20,000	Sinking fund	6,50,000
"Own" debenture account (par value Rs. 5,000)	4,200	Sinking fund investments	6,40,000

During the year 1978 the following were the transactions relating to the above :

(*a*) Purchased "Own" debentures of par value Rs. 3,000 at Rs. 3,100. (*b*) Re-sold "own" debentures held at the beginning of the year for Rs. 5,000. (*c*) Interest received on sinking fund investments Rs. 26,000. (*d*) Annual set-aside to sinking fund Rs. 50,000. (*e*) Investments of sinking fund Rs. 70,000. "Own" debentures held as on 31-12-1978 were cancelled.

Show ledger accounts relating to the above.

(B. Com., Bombay, 1970)

Solution :

Ledger of M/s. Affluence Ltd.

7% DEBENTURES ACCOUNT

	Rs.		Rs.
To Own debentures account	3,000	By Balance b/d	48,20,000
To Balance c/d	48,17,000		
	Rs. 48,20,000		Rs. 48,20,000

OWN DEBENTURES ACCOUNT

	Rs.		Rs.
To Balance b/d (F.V. Rs. 5,000)	4,200	By Bank—sales (F.V. Rs. 5,000)	5,000
To Bank—purchase (F.V. Rs. 3,000)	3,100	By 7% debentures account (F.V. Rs. 3,000)—cancelled.	3,000
To Sinking fund account—profit on sale of own debentures	800	By Sinking fund account—loss on cancellation of debentures	100
	Rs. 8,100		Rs. 8,100

SINKING FUND ACCOUNT

	Rs.		Rs
To Own debenture account—loss on cancellation of debentures	100	By Balance b/d	6,50,000
To General reserve account (1)	3,000	By Own debentures account—profit on sale of own debetures	800
To Balance c/d	7,23,700	By Bank interest on sinking fund investments	26,000
		By Profit and loss appropriation account—amount set aside	50,000
	Rs. 7,26,800		Rs. 7,26,800

SINKING FUND INVESTMENTS ACCOUNT

To Balance b/d	Rs. 6,40,000	By balance c/d	Rs. 7,10,000
To Bank	70,000		
	Rs. 7,10 000		Rs. 7,10,000

TUTORIAL NOTES

On the cancellation of own debentures (*i e.*, redemption of debentures) the amount equal to face value of debentures cancelled is transferred to general reserve.

Illustration 58. Hindusthan Ltd issued 10,000 6% debentures of Rs. 100 each on 1st January 1971. The debentures are redeemable by the creation of a sinking fund. The company had the right to call upon the trustees to apply the sinking fund moneys in purchasing own debentures, if available, below par. The following information is given :

(*a*) The annual appropriation is Rs. 50,000;

(*b*) Sinking fund balance as on 1st January 1974 was Rs. 1,31,942 represented by 6% State Loan at cost of Rs. 74,262 (face value Rs. 80,000) and *sinking fund cash* Rs. 7,680. This cash balance together with the annual appropriation of Rs. 50,000 was invested in 6% State Loan. The loan bonds which were purchased cum-interest had a face value of Rs. 60,000.

(*c*) 1st September 1974 sold the State Loan of the face value Rs. 40,000 out of loan held on 1st January 1974 for Rs. 38,000 (ex-interest) and *the proceeds were applied in* purchasing own debentures (face value Rs. 45,000) ex-interest.

(*d*) The debentures purchased are cancelled on 31st December.

(*e*) Interest on *State Loans is received on* 31st March and 30th September.

(*f*) Interest on debentures is paid on 30th June and 31st December.

(*g*) Debentures outstanding as on 1st January 1974 were Rs. 4,67,000.

Make ledger entries in the books of the company to give effect to the above. **(C. A. Final Nov., 1975)**

TUTORIAL NOTES

(1) Alternatively it can be changed to profit and loss account of the year. Since 3/4ths of debentures have been redeemed, 3/4ths of the debenture-discount has been written off.

GENERAL RESERVE ACCOUNT

	Rs.		Rs.
To Balance c/d	3,00,000	Sinking fund account	3,00,000
	Rs. 3,00,000		Rs. 3,00,000

Illustration 57. Affluence Ltd. had issued 7% debentures of the par value of Rs. 50,00,000 divided into 5,000 debentures of Rs. 1,000 each redeemable at any time by the company after giving three months' notice. Under the terms of issue the company had the power to purchase in the open market its own debentures and either resell them or cancel them. On January 1, 1978 the following were the balances in the relevant accounts in the books of the company :

	Rs.		Rs.
Debenture issued	48,20,000	Sinking fund	6,50,000
"Own" debenture account (par value Rs. 5,000)	4,200	Sinking fund investments	6,40,000

During the year 1978 the following were the transactions relating to the above :

(*a*) Purchased "Own" debentures of par value Rs. 3,000 at Rs. 3,100. (*b*) Re-sold "own" debentures held at the beginning of the year for Rs. 5,000. (*c*) Interest received on sinking fund investments Rs. 26,000. (*d*) Annual set-aside to sinking fund Rs. 50,000. (*e*) Investments of sinking fund Rs. 70,000. "Own" debentures held as on 31-12-1978 were cancelled.

Show ledger accounts relating to the above.

(B. Com., Bombay, 1970)

Solution :

Ledger of M/s. Affluence Ltd.

7% DEBENTURES ACCOUNT

	Rs.		Rs.
To Own debentures account	3,000	By Balance b/d	48,20,000
To Balance c/d	48,17,000		
	Rs. 48,20,000		Rs. 48,20,000

OWN DEBENTURES ACCOUNT

	Rs.		Rs.
To Balance b/d (F.V. Rs. 5,000)	4,200	By Bank—sales (F.V. Rs. 5,000)	5,000
To Bank—purchase (F.V. Rs. 3,000)	3,100	By 7% debentures account (F.V. Rs. 3,000)—cancelled.	3,000
To Sinking fund account—profit on sale of own debentures	800	By Sinking fund account—loss on cancellation of debentures	100
	Rs. 8,100		Rs. 8,100

SINKING FUND ACCOUNT

	Rs		Rs
To Own debenture account—loss on cancellation of debentures	100	By Balance b/d	6,50,000
To General reserve account (1)	3,000	By Own debentures account—profit on sale of own debetures	800
To Balance c/d	7,23,700	By Bank interest on sinking fund investments	26,000
		By Profit and loss appropriation account—amount set aside	50,000
	Rs. 7,26,800		Rs. 7,26,800

SINKING FUND INVESTMENTS ACCOUNT

To Balance b/d	Rs. 6,40,000	By balance c/d	Rs. 7,10,000
To Bank	70,000		
	Rs. 7,10,000		Rs. 7,10,000

TUTORIAL NOTES

On the cancellation of own debentures (*i e.*, redemption of debentures) the amount equal to face value of debentures cancelled is transferred to general reserve.

Illustration 58. Hindusthan Ltd issued 10,000 6% debentures of Rs. 100 each on 1st January 1971. The debentures are redeemable by the creation of a sinking fund. The company had the right to call upon the trustees to apply the sinking fund moneys in purchasing own debentures, if available, below par. The following information is given:

(*a*) The annual appropriation is Rs. 50,000.

(*b*) Sinking fund balance as on 1st January 1974 was Rs. 1,31,942 represented by 6% State Loan at cost of Rs. 74,262 (face value Rs 80,000) and sinking fund cash Rs. 7,680. This cash balance together with the annual appropriation of Rs. 50,000 was invested in 6% State Loan. The loan bonds which were purchased cum-interest had a face value of Rs. 60,000.

(*c*) 1st September 1974 sold the State Loan of the face value Rs. 40,000 out of loan held on 1st January 1974 for Rs. 38,000 (ex-interest) and the proceeds were applied in purchasing own debentures (face value Rs. 45,000) ex-interest.

(*d*) The debentures purchased are cancelled on 31st December.

(*e*) Interest on State Loans is received on 31st March and 30th September.

(*f*) Interest on debentures is paid on 30th June and 31st December.

(*g*) Debentures outstanding as on 1st January 1974 were Rs. 4,67,000.

Make ledger entries in the books of the company to give effect to the above. (C. A. Final Nov., 1975)

Solution :

SINKING FUND INVESTMENT ACCOUNT
(A) Own Debentures Account

1974		Nominal Rs.	Cost Rs.	1974		Nominal Rs.	Cost Rs.
Sept. 1	To Sinking fund cash account	45,000	38,550	Dec. 31	By 6% debentures account cancellation	45,000	45,000
"	To Sinking fund account—profit on cancellation		(4) 6,450				
	Rs.	45,000	45,000		Rs.	45,000	45,000

SINKING FUND ACCOUNT

1974		Rs.	1974		Rs.
Dec. 31	To General reserve—transfer	45,000	Jan. 1	By Balance b/d	1,31,942
"	" Balance c/d	1,52,761	Sept. 1	" S. F. Investments account—profit on sale	869
			Dec. 31	By Own debentures account—profit on cancellation	6,450
			"	By Interest on S.F. investment A/c	8,500
			"	Profit and loss appropriation A/c	50,000
	Rs.	1,97,761		Rs.	1,97,761

SINKING FUND INVESTMENT ACCOUNT
(B) State Loan Account

1974		Nominal Rs.	Cost Rs.	1974		Nomiual Rs.	Cost Rs.
Jan. 1	To Balance b/d	80,000	74,262	Sept. 1	By Sinking fund cash-sale	40,000	38,000
	To Sinking fund cash account	60,000	56,780	Dec. 31	By Balance c/d	1,00,000	93,911
Sept. 1	To Sinking fund account—profit on sale		(3) 869				
	Rs.	1,40,000	1,31,911		Rs.	1,40,000	1,31,911

SINKING FUND CASH ACCOUNT A

1974		Rs.	1974		Rs.
Jan. 1	To Balance b/d	7,680	Jan. 1	By Interest on S.F. investments A/c	900
"	To Bank—annual appropriation	50,000	"	S.F. Investment A/c—6% State Loan	56,780
March 31	To Interest on S.F. investments	4,200	Sept. 1	By debenture interest A/c	450
Sept. 1	To S.F. Investment—State Loan	38,000	"	By Own debenture account	38,550
"	To Interest on the above	1,000	Dec. 31	By Balance c/d	7,200
Sept. 30	To Interest on State Loan	3,000			
	Rs.	1,03,880		Rs.	1,03,880

INTEREST ON S.F. INVESTMENTS ACCOUNT

1974		Rs.	1974		Rs.
Jan. 1	To accrued interest A/c (2)	1,200	Mar. 31	By Sinking fund cash account (On Rs. 1,40,000 for 6 months)	4,200
"	To Sinking fund cash account (Interest paid at the time of purchasing Rs. 60,000 State Loan)	900	Sept. 1	By Sinking fund cash account (Interest realised on sale of Rs. 40,000 State Loan bonds)	1,000
Dec. 31	To Sinking fund A/c—transfer	8,500	Sept. 30	By Sinking fund cash (Interest on Rs. 1,00,000 for 6 months)	3,000
			Dec. 31	By Debenture interest (Interest on own debenture (on Rs. 45,000 for 4 months)	900
			"	By accrued interest (2) (on Rs. 1,00,000 for 3 months)	1,500
	Rs.	10,600		Rs.	10,600

DEBENTURE INTEREST ACCOUNT

1974		Rs.	1974		Rs.
June 30	To Bank A/c	14,010	Dec. 31	By Profit and loss account —transfer	28,020
Sept. 1	To Sinking fund cash account (interest on Rs. 45,000 for July and August)	450			
Dec. 31	To Bank A/c	12,660			
	To Interest on S.F. investments (on Rs. 45,000 own debentures for 4 months)	900			
	Rs.	28,020		Rs.	28,020

6% DEBENTURES ACCOUNT

1974		Rs.	1974		Rs.
Dec. 31	To own debentures account cancellation	45,000	January 1	By Balance b/d	4,67,000
	To Balance c/d	4,22,000			
	Rs	4,67,000		Rs.	4,67,000

TUTORIAL NOTES

(1) Sinking fund cash account is kept separately and is debited with interest received on S. F. Investments, sale proceeds of investments and annual appropriation amounts. This account is credited with moneys spent on the purchase of S. F. Investments including own debentures. At the time of purchase if the price includes interest, such interest is also credited to this account Without such segregation of cash, sinking fund may not be available for investment.

(2) In 1973 accrued interest of Rs. 1,200 on Rs. 80,000 for the period 1st October to 31st December must have been taken into account. On 1-1-1974 a reverse entry has to be passed by debiting interest account and crediting accrued interest account. Again on 31st December, 1974 accrued interest account is debited

interest account is credited with Rs. 1,500 being the 3 months interest on Rs. 1,00,000

(3) Book value of the investment made on 1-1-1974 is calculated as follows:

Sinking fund cash balance	Rs. 7,680
Annual appropriation	50,000
Amount available for investment	57,680
Less: Interest on Rs. 60,000 accrued for 3 months	900
Cost of Rs. 60,000, 6% State Loan	56,780

The interest of Rs. 900 included in the price is debited to interest on S. F. Investment account.

(4) The cost of own debentures is arrived at as follows:

Amount realised by sale of State Loan bonds.	
Amount received towards debentures	Rs. 38,000
Amount received towards interest thereon	1,000
Amount utilised to purchase debentures	39,000
Less: Interest included in the above price	450
Amount debited to own debentures A/c	38,550

Illustration 59. Prosperous Ltd. issued Rs. 10,00,000 6% debenture stock at par on 2-1-1955. Interest was payable on 30th June and 31st December each year. Under the terms of the debenture trust deed the stock is redeemable at par. The trust deed obliges the company to pay to the trustees on 31st December 1966 and annually thereafter, the sum of Rs. 1,00,000 to be utilised for the redemption and cancellation of an equivalent amount of stock, which is to be selected by drawing lots.

Alternatively, the company is empowered as from 1st January 1966 to purchase its own debentures in the open market. These debentures must be surrendered to the trustees for cancellation and any adjustments for accrued interest recorded in the books of account. If in any year the nominal amount of the stock surrendered under this alternative does not amount to Rs. 1,00,000, then the shortfall is to be paid by the company to the trustees in cash on the 31st December.

The following purchases of stock were made by the company:

	Nominal value of stock purchased	*Purchase price per Rs. 100 of stock*
	Rs.	Rs.
(1) 30th September, 1966	1,20,000	98
(2) 31st May, 1967	75,000	95 (Ex-interest)
(3) 31st July, 1968	1,15,000	92

The company fulfilled all its obligations under the trust deed.

Prepare the following ledger accounts: (*a*) Debenture stock A/c; (*b*) Debenture redemption A/c; (*c*) Debenture interest A/c. Ignore costs and taxation.

(C.A. Final, 1970, A.C.S. Final 1977)

Solution :

Ledger of M/s. Prosperous Ltd.

6% DEBENTURE STOCK ACCOUNT

Date	Particulars	Rs.	Date	Particulars	Rs.
1966			1966		
Sept. 30	To Debenture redemption account	1,20,000	Jan 1	By Balance b/d	10,00,000
Dec. 31	To Balance c/d	8,80,000			
		Rs. 10,00,000			Rs. 10,00,000
1967			1967		
May 31	To Debenture redemption account	75,000	Jan. 1	By Balance b/d	8,80,000
Dec. 31	To Debenture redemption account (shortage met)	25,000			
Dec. 31	To Balance c/d	7,80,000			
		Rs 8,80,000			Rs. 8,80,000
1968		Rs	1968		
July 31	To Debenture redemption account	1,15,000	Jan. 1	By Balance b/d	7,80,000
Dec. 31	To Balance c/d	6,65,000			
		Rs. 7,80,000			Rs. 7,80,000

6% DEBENTURE REDEMPTION ACCOUNT

Date	Particulars	Rs	Date	Particulars	Rs.
1966			1966		
Sept. 30	To Bank account (1)	1,15,800	Sept 30	By 6% debenture stock account	1,20,000
	To Capital reserve a/c	4,200			
		Rs. 1,20,000			Rs. 1,20,000
1967			1967		
May 31	To Bank account (ex-interest price)	71,250	May 31	By 6% debenture stock account	75,000
	To Bank a/c (shortage met)	25,000	Dec. 31	By 6% debenture stock account (shortage met)	25,000
	To Capital reserve a/c	3,750			
		Rs. 1,00,000			Rs. 1,00,000
1968			1968		
July 31	To Bank a/c (2)	1,05,225	July 31	By 6% debenture stock account	1,15,000
	To Capital reserve a/c	9,775			
		Rs 1,15,000			Rs. 1,15,000

TUTORIAL NOTES

(1) Cum-interest price$=\frac{98}{100}\times$Rs. 1,20,000=Rs 1,17,600. True price=Rs. 1,17,600—Rs 1,800=Rs. 1,15,800. Rs. 1,800 is interest on Rs. 1,20,000 for 3 months from July to September.

(2) Cum-interest price$=\frac{92}{100}\times$Rs 1,15,000=Rs. 1,05,800 True price=Rs. 1,05,800—Rs. 575=Rs. 1,05,225. Rs. 575 is interest on Rs 1,15,000 for one

(3) After going through the debenture redemption account, the reader would have noticed that this account is no different from own debentures account. The difference is only in nomenclature.

(4) As the own debentures are immediately cancelled, interest on own debentures is not taken into account.

DEBENTURE INTEREST ACCOUNT

		Rs.			Rs.
1966			1966		
June	30 To Bank (on Rs. 10,00,000)	30,000	Dec.	31 By Profit and loss account	58,200
Sept.	30 To Bank (interest on cum-interest purchase)	1,800			
Dec.	31 To Bank (on Rs. 8,80,000)	26,400			
		Rs. 58,200			Rs. 58,200
1967			1967		
May	31 To Bank (interest paid on purchase of debentures)	1,875	Dec.	31 By Profit and loss account	50,175
June	30 To Bank (interest on Rs. 8,05,000)	24,150			
Dec.	31 Bank (interest (on Rs. 8,05,000)	24,150			
		Rs. 50,175			Rs. 50,175
1968			1968		
June	30 To Bank (on Rs. 7,80,000)	23,400	Dec.	31 By Profit and loss account	43,925
July	31 To Bank (interest on cum interest purchase)	575			
Dec.	31 To Bank (on Rs. 6,65,000)	19,950			
		Rs. 43,925			Rs. 43,925

Illustration 60. A company had issued 9% debentures of the face value of Rs. 1,000 each (redeemable at par) interest on which is to be paid half yearly on 30th of June and 31st of December each year. Under the terms of issue, it was permitted to acquire its own debentures from the market with option to resell them or to cancel them in redemption of outstanding debenture liability, On April 1, 1968, the debentures account showed a credit balance of Rs. 40,60,000 and sinking fund Rs. 4,90,000. The annual set-aside to sinking fund was to be Rs. 1,00,000. During the year to March 31, 1969 its transactions in its own debentures were as under :

Date	*Transaction*
April 1, 1968	Opening balance of uncancelled own debentures (at cost on 'FIFO' basis): 10 debentures @ Rs. 990 and 20 debentures @ Rs. 1,000.
April 30	Sold 16 debentures @ Rs. 1,005.
July 1	Purchased 10 debentures @ Rs 985.

Nov. 1 Purchased 10 [illegible]

March 31, 1969 After retaining 14 [illegible] debentures were cancelled [illegible] outstanding [illegible]

All transactions of sale and purchase are [illegible] debentures account, debenture interest account [illegible] deduction at source may be ignored. [illegible]

Solution :

OWN DEBENTURES ACCOUNT

1968	Rs.	1968	Rs.
April 1 To Balance b/d		April 30 By Bank, [illegible]	[illegible]
10 at 990	9,900	April 30 By Loss on [illegible] (1)	[illegible]
20 at 1,000	20,000	1969	
	29,900	March 31 By Debentures [illegible] ([illegible])	[illegible]
July 1 To Bank, 10 @ 985	9,850	March 31 By Balance c/d [illegible]	[illegible]
Nov. 1 To Bank, 10 @ 990	9,900		
Nov. 1 To Profit on Deb. a/c (2) (cancellation)	90		
	Rs. 49,740		Rs. [illegible]

TUTORIAL NOTES

(1) *Loss on sale* :

Cost price of 10 debentures (FIFO)		[illegible]
Cost price of 6 debentures		[illegible]
Total cost price		[illegible]
Total amount realised		[illegible]
Loss on sale	Rs.	[illegible]

(2) *Profit on cancellation* :

Purchase price (FIFO) 14 from the balance		[illegible]
6 from the lot purchased on July 1, i.e., 6 × Rs. 985		[illegible]
Total purchase price		[illegible]
Face value of debentures cancelled		[illegible]
Profit on cancellation		[illegible]

DEBENTURE INTEREST ACCOUNT

		Rs.			Rs.
1968			1968		
June 30	To Bank (on outside debentures of Rs. 40,46,000)	1,82,070	April 1	By Interest accrued account (on outside debentures of Rs. 40,30,000 for 3 months)	90,675
	To Interest saved a/c	435	April 30	By Bank (interest on 16 debentures sold at cum-interest)	480
Nov. 1	To Bank (interest on 10 debentures purchased on Nov. 1, effect of cum-interest price)	300	1969		
Dec. 31	To Bank (on outside debentures of Rs. 40,26,000)	1,81,170	March 31	By Profit and loss account	3,65,400
	To Interest saved a/c	1,230			
1969					
March 31	To Interest accrued a/c	90,585			
	To Interest saved account	765			
		Rs. 4,56,555			Rs. 4,56,555

CALCULATION OF INTEREST SAVED

Number of debentures	Amount Rs.	Period From	Period To	Period—months	Amount of interest Rs.
30	30,000	April 1	April 30	1	225
14	14,000	May 1	June 30	2	210
					435
24	24,000	July 1	Dec. 31	6	1,080
10	10,000	Nov. 1	Dec. 31	2	150
					1,230
34	34,000	Jan. 1	March 31	3	765

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'true' or 'false' :

(1) Debenture interest is payable only when a company makes profit.

(2) Registered debentures are those which are transferable only by transfer deed.

(3) Annual appropriation made to build the debenture redemption fund is debited to the profit and loss account above the line.

(4) A company cannot buy its own debentures.

(5) Profit on cancellation of debentures is to be transferred to general reserve.

(6) A company is not bound to write off 'discount on issue of debentures' to profit and loss account.

(7) Interest on sinking fund investments is credited to profit and loss account.

(8) Own debentures can be cancelled only on dates when interest becomes payable on debentures.

(9) When own debentures are purchased by company on ex-interest basis, in addition to the purchase price, interest will be paid from the last date of interest payment to the date of transaction.

(10) For the same purchase price, profit on cancellation of own debentures will be more when purchased on cum-interest basis.

I. Fill in the blanks :

(1) Debentures which cannot be transferred by mere delivery are called...debentures.

(2) Mortgage debentures may be secured either by way of a... charge on specific assets or by way of a...charge on the general assets of the company.

(3) After all the debentures are redeemed the balance in the sinking fund is to be transferred to... ... .

(4) For the same purchase price profit on cancellation of own debentures is more when purchased on... ...basis.

(5) *Profit on sale of sinking fund investments it to be credited to...* .. account.

(6) *Own debenture account will appear on the.. side of the balance* sheet.

(7) When debentures are redeemed in annual instalments the redemption is known as... ... ...

(8) Premium on redemption of debentures is in the nature of a... account.

(9) When debentures are redeemed from out of profits an equal amount is transferred to... ... ...account.

(10) While shareholders are part proprietors of the undertaking, debetureholders are merely in the position of... ... .

II. Indicate the correct or best answer :

(1) Premium on redemption of debentures account is in the nature of :

(*a*) Personal account.
(*b*) Real account.
(*c*) Nominal account.

(2) After the debentures are redeemed, the balance in the sinking fund account is transferred to :

(*a*) Capital reserve.
(*b*) General reserve
(*c*) Profit and loss account.

(3) When own debentures are cancelled, any profit on cancellation is transferred to :

(a) Profit and loss account
(b) General reserve
(c) Capital reserve.

(4) The following journal entry appears in the books of X Ltd. :

Bank account	Dr. 96,000	
Loss on issue of Debentures account	Dr. 10,000	
To 8% debentures account		1,00,000
To Premium on redemption of debentures account		6,000

Debentures have been issued at a discount rate of :

(a) 10 per cent
(b) 4 per cent
(c) 6 per cent

(5) The following journal entry is made in the books of X Ltd. :

6% Debentures account	Dr. 80,000	
Premium on redemption of debentures account	Dr. 3,000	
To Bank		73,600
To Profit on cancellation of debentures account		9,400

Debentures have been redeemed ;

(a) at par
(b) at Rs. 92
(c) at Rs. 90.

(6) The nominal and book values of sinking fund investments account are respectively Rs. 1,00,000 and Rs. 96,000. The company has sold investments of the nominal value Rs. 20,000 at a price that was sufficient to redeem the debentures of Rs. 20,000 at Rs. 102. The profit on sale of investments is :

(a) Rs. 1,200
(b) Rs. 800
(c) Nil

Questions

1. Define debenture. Distinguish it from debenture stock.

2. What are the types of debentures ? Briefly describe them.

3. Give the accounting treatment of issue of debenture as a collateral security.

4. Is there any restriction on the issue of debenture at discount ? If not, then why ?

5. Enumerate and describe the various ways of issuing debentures.

6. What are the alternatives available for making the provision for redeeming debentures ? Is it necessary to make such provision ?

7. State what do you understand by :
   (a) Redemption of debenture out of capital,
   (b) Redemption of debenture out of profit ?
8. State what is the difference between :
   (a) Redemption of debenture out of provision (sinking fund) and
   (b) Redemption of debenture out of profit ?

9. What is debenture discount ? What are the methods for writing it off ?

10. What accounting entries are made with regard to interest on debenture ?

Exercises

1. X Ltd. purchased assets worth Rs. 28,80,000. It issues debentures at 4% discount in satisfaction of the purchase price. Calculate how many debentures will be issued in case debenture is of Rs. 100 each. *(30,000*

2. How many debentures will a company be required to issue for satisfying the purchase consideration of Rs. 28,80,000 if the debenture is of Rs. 80 and is issued at a premium of Rs. 10 per debenture ? *(32,000*

3. What amount should be set aside to get Rs. 10,00,000 at the end of 10 years ? The amount is expected to earn 4% rate of interest. Sinking fund table shows that 0 08329094 at 4% intesest will accumulate Re. 1 at the end of 10 years. *(Rs. 83,290·94*

4. What amount should be set aside to get Re. 1 at the end of years, the rate of interest being 5% ? Use the following formula :

$$\frac{i}{(1+i)^n-1} \quad \text{where } i=\text{per unit rate of intere} \quad n=\text{number of years}$$

(0·31720886

5. A company sells away 2,000 War Bonds of Rs. 100 each at 10. Calculate the profit or loss made on it when it appears in the balance sheet as under :

BALANCE SHEET

	Rs.		Rs
Debenture	10,00,000	Debenture sinking fund investment . Rs 3,60,000 Rs. 100 4% war bond	3,80,00
Debentures sinking fund	4,00,000		

(Loss Rs. 7,111)

Problems

ISSUE OF DEBENTURES

1. What journal entries will be made for the following types of issues :
   (a) A company issued 1,000 6% debentures of Rs. 100 each at par
   (b) A company issued 1,000 6% debentures of Rs. 100 each at 10 premium ; and

(*c*) A company issued 1,000 6% debentures of Rs. 100 each at 10% discount. **25·19**

2. What journal entries will be made in the following cases :

(*a*) A company issued Rs. 40,000 6% debentures at par redeemable at par ;

(*b*) A company issued Rs. 40,000 6% debentures at discount of 10% redeemable at par ;

(*c*) A company issued Rs. 40,000 6% debentures at premium of 5% redeemable at par ;

(*d*) A company issued Rs. 40,000 6% debentures at par redeemable at 10% premium ; and

(*e*) A company issued Rs. 40,000 6% debentures at a discount of 5% and redeemable at 5% premium.

Also show how will you deal with the loss on issue of debentures in the books. **25·20**

DISCOUNT ON DEBENTURES

3. A company issued debentures of the face value of Rs. 1,00,000 at a discount of 6%. The debentures were repayable by annual drawings of Rs. 20,000. How would you deal with the discount on debentures ? Show the discount account in the company's ledger for the period of duration of debentures. **(C. A. Inter., 1964) 25·26**

4. A company issued debentures of the face value of Rs. 5,00,000 at a discount of 9%. The debentures were repayable by annual drawing of Rs. 1,00,000. Show the discount account in the company's ledger for the period of duration of debentures. **(B. Com., Rajasthan, 1971)**

PROVISION FOR REDEMPTION

5. (*i*) On 1st January, 1960 the Asian Trading Co. Ltd. issued debentures for Rs. 5,00,000 redeemable at par on 1st January, 1965. It was decided to establish a sinking fund for the purpose of redemption. Show the ledger accounts for five years, assuming the annually invested amount earns 5% interest. Sinking fund table shows that 0·1809748 amounts to Re. 1 at 5% in five years.

(*ii*) Calculate what amount will be set aside if the company has agreed to pay off debentures at a premium of 10% the rate of interest on sinking fund investment and period of redemption remaining the same **25·27**

6. A private limited company, being in need of further capital, issued debentures. One of the directors took up Rs. 50,000 at a premium of 5 per cent ; a friend of his subscribed for Rs, 50,000 at a premium of 3 per cent, while Rs. 1,00,000 were issued to the company bankers by way of collateral security for a loan of Rs 60,000. Show how these transactions would appear in the company's balance sheet and pass journal entries to record the same. **(Indian Institute of Bankers, Part I, 1968, Modified)**

7. (*i*) A company purchased assets of the book value of Rs. 4,00,000 and took over the liabilities of Rs. 50,000 from Dalal Bros. It was agreed

[illegible]

(*ii*) What journal entries will be done in all the above three cases when the purchase consideration is settled at Rs. 2,80,000 ? 25·21

[*Part I, Goodwill Rs. 30,000 ; case (a) 3,800 debentures of Rs. 100 each ; case (b) 4,222 debentures of Rs. 100 each ; case (c) 3,454 debentures of Rs. 100 each. Part II, Capital reserve Rs. 70,000 ; case (a) 2,800 debentures of Rs. 100 each ; case (b) 3,111 debentures of Rs. 100 each ; case (c) 2,545 debentuses of Rs. 100 each*]

8. *X* Limited issued for subscription 5,000 debentures of Rs. 100 each at a discount of 3%. The whole of the issue offered was underwritten by Pal & Co., commission being $2\frac{1}{2}$% on nominal value. The public subscribed Rs. 4,00,000 worth of debentures balance being allotted to Pal & Co. [illegible] released their holdings in the market. [illegible] Rs. 50,000 [illegible] loan of Rs. 40,000. Show the entries in the cash book and ledger of the company and show how the entries would appear in the balance sheet.

(C. A. Inter., 1963) 25·23

9. On 1st January 1965 a limited company made an issue of Rs. 5,00,000 5% Mortgage debentures, interest thereon being payable on 30th June and 31st December. Of this amount Rs. 2,50,000 was subscribed at a premium of 2%Rs. 1,00,000 was taken at par ; and the balance was deposited with the company's bank as collateral security for a loan of Rs. 1,25,000, interest on the bank loan being payable at 6% p.a. on 31st December each year. Under the terms of this issue, the company was required : (*a*) To make an annual contribution of Rs. 50,000 to a sinking fund which was to be utilised in the company's own business. (*b*) To repay Rs. 2,00,000 of the debentures at the end of 5 years.

You are required (*a*) to give journal entries to record the issue of debentures, the payment of interest and the creation of sinking fund in 1965, and (*b*) to show, by means of a balance sheet, the position of the [illegible]

[illegible]

[*Balance on 31st December, 1965 5% mortgage debentures Rs. 3,50,000 ; loan Rs. 1,25,000 (secured by the issue of 5% mortgage debentures of Rs. 1,50,000 as collateral security) ; Debenture sinking fund Rs. 50,000*]

Note : It has been assumed interest on loan and debentures has been paid. Since there must be other profits, the interest must have been set aside out of those profits.

[illegible]

amount to earn 5% interest net, and that the amount annually set aside for the purpose is Rs. 90,412·50. The investments are to be purchased in multiples of Rs. 100. (B. Com., Kerala, 1971)

REDEMPTION

11. What entries for the redemption of debentures will be done when—(*a*) debentures are redeemed by annual drawings out of profits ; (*b*) debentures are redemed by drawing a lot out of capital ; (*c*) debentures are redeemed by purchasing them in the open market when sinking fund for the redemption of debentures is maintained ; and (*d*) debentures are redeemed by purchasing them in the open market when sinking fund for the redemption of debentures is not maintained—(*i*) when out of profit, (*ii*) when out of capital ? 25·28

12. What journal entries will be made in the following cases when company redeems debentures at the expiry of period by serving the notice; (*a*) when debentures were issued at par with a condition to redeem at premium ; (*b*) when debentures were issued at premium with a condition to redeem them at par ; and (*c*) when debentures were issued at discount with a condition to redeem them at premium ? 25·29

13. On 1st January, 1961, Metal Products Ltd. issued debentures for Rs. 1,00,000 redeemable at par at the end of five years and it was resolved that a sinking fund should be formed and invested in tax-free securities.

Show the ledger accounts for five years, assuming that the interest received on the investments was at the rate of 5 per cent on cost, that the interest was received yearly and immediately invested and that the investments were realized at a loss of Rs. 300 at the end of five years.

Reference to the table shows that Rs. 0·180975 invested at the end of each year at 5 per cent compound interest will produce Re. 1 at the end of five years. (I.C.W.A. Inter., 1966)

[*Interest 1st year Rs. 904·87 ; 3rd year Rs. 1,855·00 ; 4th year Rs. 2,852·63 ; 5th year Rs. 3,900 ; Sinking fund transferred to general reserve in 1965 Rs. 99,700*]

14. A company has Rs. 6,00,000 six per cent debentures outstanding on 1st January 1970. On this date, the debenture redemption fund stood at Rs. 5,00,000 represented by Rs. 5,90,000 four and a half per cent (1982) loan of the Government of India. The annual instalment added to the fund is Rs. 82,300. On 31st December 1970, the bank balance after the receipt of interest on the investment was Rs. 1,56,400. On that date, the investment was sold at 83 per cent net and the debentures were paid off. Show the necessary accounts for the year 1970.

(B. Com , Mysore, 1969 ; B. Com., Osmania, 1972, 73)

15. On 1st January, 1969, Importers Ltd. issued Rs. 20,00,000 7% debentures at 5% discount repayable in five years at par ; the company reserved the right to redeem to the extent of Rs. 2,00,000 in any year by purchase in the open market. The interest was payable half-yearly on 30th June and 31st December, and the same was duly paid.

On 31st December, 1969, the company purchased Rs. 2,00,000 deben-

tures at a cost of Rs. 1,91,000. Pass necessary journal entries in the books of the company up to 31st December, 1969 including closing entries on that date if the above redemption was—(i) out of profit, (ii) out of capital.

25 30

16. On 1st January 1960, a company made an issue of 5,000 5% debentures of Rs. 100 each at Rs. 94 per debenture. ... provided for redem... fro... Rs. ... Du... debenture of the face v... 14,000 at Rs. 92 per debe...

(B. Com., Bombay, 1966 ; B. Com., Poona, 1973)

(Profit on cancellation of debentures Rs. 1,480)

(Hint: Transfer from profit and loss appropriation account Rs. 20,000 to debenture redemption account. If this entry is not done, then the redemption will be said to be out of capital (not profit). In the absence of any instruction it is a wiser assumption that redemption is out of profit.)

17. A company has a liability of Rs 1 lakh in the form of 5% debentures redeemable at its option after giving three months notice at 105%. The company has ... annually from and o... in Government Securit...

On 31st December 1960 the balances on the following accounts were:

	Rs		Rs.
Premium on shares	30,000	5% Debentures	1,00,000
Debenture redemption reserve fund	90,000	Investments of debenture redemption fund	90,000
General reserve	20,000	Bank balance	25,000
Profit and loss (Cr)	18,000		

The directors after giving due notice exercise their option to redeem the debenture of the company on 1st January 1961. For this purpose the investments were sold for cash at a loss of Rs 3,000. You are required to write up the ledger accounts concerned to give effect to the redemption.

(B. Com, Andhra, 1968)

18. A company made an issue of 3,000 7½ per cent debentures of Rs. 100 each at par. A sinking fund is being created to provide for repayment. Under the terms of issue the company retained the right of purchasing debentures in the open market for cancellation. On 1st January 1969, the directors of the company purchased Rs. 30,000 debentures at 98. In order to provide for the redemption they realised Rs. 20,000 Jagirdari Bonds at 80% and Rs. 13,400 stock of J.K. Ltd at par.

On 1st January 1969 just before the date of redemption the following position was shown.

	Rs		Rs
7½% debentures	2,00,000	Sinking fund investments :	
Debenture sinking fund	1,90,000	Jagirdari Bonds of Rs 1,00,000	70,000
		Stock of J K. Ltd Rs 1,20,000	1,11,000

You are required to make journal entries for the redemption of debentures and give the revised balances of the above accounts as they would appear in the balance sheet. (B. Com., Punjabi University, 1972)

19. Quicksteed Ltd issued Rs. 2,00,000 8% debentures at Rs. 99 on July 1, 1967. The stock is to be redeemed at par on July 1, 1988 but the trustees have power to purchase for immediate cancellation debentures in the open market should they be below par.

Provision has been made for a sinking fund to be established with an annual contribution of Rs. 4,000 to be made on June 30, beginning in 1968. This amount together with the income from investments received in the preceding year is to be invested annually on July 1. On December 31, 1969 investments which had cost Rs. 3,040 were sold realising the sum of Rs. 3,100 and the proceeds used to purchase and cancel debentures of Rs. 3,200 nominal value at 96 (including expenses). The income received from sinking fund investments for the years ended June 30, 1969 and 1970 was Rs. 210 and Rs. 380 respectively.

You are required to write up the ledger accounts (including the sinking fund cash account) for the years to June 30, 1970. Ignore debenture interest. **(C.A, Inter., England, 1971) 25·31**

(*Sinking fund investment balance Rs. 5,170 ; Sinking fund account balance Rs. 9,578, ; Sinking fund cash account balance Rs. 4,408*)

20. Prosperous Ltd issued 25,000 7 per cent debentures of Rs. 100 each at a discount of 2½ per cent on 1st January 1964. As per the terms of the issue, the company is required to maintain a non-cumulative sinking fund (*i.e.*, exclusive of interest on sinking fund investments) but with a provision that the company shall have the power to apply the sinking fund investments in the purchase of debentures in the open market, if below par, at any time. The annual sinking fund contribution is Rs. 60,000. Following are the relevant facts for the years 1965 and 1966 :

(*A*) Interest received by the company on investments in 1965, Rs. 1,970 and 1966, Rs. 3,040.

(*B*) Realisation of sinking fund investments : (1) 31st December 1965 Rs. 27,930 (original cost Rs. 28,010) ; (2) 31st December 1966 Rs. 39,000 (original cost Rs. 38,700).

(*C*) Debentures purchased in the open market : (1) 31st December 1965 at cost of Rs. 27,915 (paid-up value Rs. 29,315) ; (2) 31st December 1966 at cost of Rs. 39,000 (paid-up value of Rs. 39,150).

You are required to prepare the necessary ledger accounts for the two years. **(C.A. Final, 1973)**

(*Balances on December 1966 : Sinking fund investments account Rs. 1,13,290 ; Sinking fund account Rs. 1,11,535 ; Debenture account Rs. 24,31,535*)

Note. Since sinking fund is non-cumulative the profit on redemption of debentures, interest on sinking fund investments, profit on sale of investments have been transferred to capital reserve and profit and loss account respectively.

21. Bright Ltd issued Rs. 6,00,000 debentures during 1958 on the following terms and conditions : (1) A sinking fund to be created by yearly appropriation of profit and similar amount to be invested outside. (2) The company will have the right to purchase for cancellation debentures from the market if available below par. (3) The debentures are to be redeemed on 31st December, 1968 at a premium of 2%.

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Rs. 33, 900. (*b*) The income from sinking fund investment, Rs. 22,200 received on 1st July 1968, was not invested. (*c*) On 29th December, 1968, Rs. 4,23,0C0 was received on sale of the remaining sinking fund investments. (*d*) On 31st December, 1968, the remaining debentures were redeemed.

You are required to show for the year ended 31st December, 1968 : (*i*) Debenture account. (*ii*) Sinking fund account. (*iii*) Sinking fund investment account (*iv*) Debentures redemption account.

(C.A. Inter., 1969)

(*Profit on purchase of debenture Rs. 3,336 ; Loss on sale of investment on July 1, Rs. 900 ; Profit on sale of investments on December 29, Rs. 14,550 ; Sinking fund transferred to general reserve : on July 1, Rs. 30,000, on December 31, Rs 4,44,036*).

22. On 1st January, 1966, a limited company issued 200 5% debentures of Rs. 1,000 each at 950. Holders of these debentures have an option to convert their holdings into 8% preference shares of Rs. 100 each at a premium of Rs. 25 per share at any time within 3 years. On 31st December, 1966, a year's interest had accrued on the debentures and remained unpaid and holder of 20 debentures notified his intention to exercise his option. Pass the necessary journal entries and show how the items affected would appear in the company's balance sheet. 25·34

23. Merchants Ltd issued 10,000 7½ debentures of Rs. 1,000 each on 1st July, 1957 at a price of Rs. 990. There was a provision at the time of issue that the debentures can be redeemed either by purchase in the market or by draw of lots. The expenses of issue amounting to Rs. 50,000 were written off in 1957. In the subsequent year, the entire discount on debentures was written off.

In March 1966, the company purchased debentures worth Rs. 10,00,000 at Rs 975 and in May, 1966 worth Rs. 5,00,000 at Rs. 980 cum-interest payable on 30th June, 1966. Assuming interest is payable half yearly, *i.e.*, on 30th June and 31st December, prepare the necessary journal entries (in 1957 and 1966) recording the above transactions including interest on debentures. (C.A., Inter, 1966) 25·35

24. Robin Ltd. issued Rs. 3,50,000 7% debentures in 1967, which were redeemable at a premium of 3% on December 31, 1967.

When the debentures were issued it was provided that annual appropriations were to be made out of profits to a sinking fund to provide for their redemption, and that the appropriations be invested outside the company annually on December 31, together with the sinking fund investment income received in the year ended on that date.

During the life of the debentures, the trustees were empowered to purchase for immediate cancellation any debentures available on the or

market below redemption price, and to finance the purchase by selling sinking fund investments.

On January 1, 1967, the balance on the sinking fund account amounted to Rs. 2,09,650, represented by an equal amount of investments at cost. The debentures in issue at that date amounted to Rs. 2,20,000.

During the year ended December 31, 1967 the following transactions took place: (1) On January 2, 1967, investments costing Rs. 19,500 were sold, realising the sum of Rs. 21,040, and on the same date Rs. 20,600 debentures were purchased at 101 (including expenses) and cancelled. (2) The half-year's debenture interest was paid on June 30, 1967. (3) The income on sinking fund investments received during the year amounting to Rs. 10,500 was realised in cash pending the redemption of the debentures. (4) The balance of the sinking fund investments was sold and the proceeds amounting to Rs. 2,15,690 were received on December 14, 1967. (5) The debenture were repaid on December 31, 1967 together with interest due to date.

You are required to write up ledger accounts (excluding the cash book) necessary to record the above transactions for the year ended December 31, 1967. (C.A Inter., England, 1968) 25·36

(*Transfer to general reserve from sinking fund—January 2, 1967 Rs. 20,600 ; December 31, 1967, Rs. 2,20,442*)

25. Mimek Ltd issued Rs. 1,00,000, 6% debentures at par on January 1, 1958, interest being payable on June 30 and December 31 in each year. Under the terms of the debenture trust deed the debenture is redeemable at par. The trust deed obliges the company to pay to the trustees on December 31, 1966 and annually thereafter, the sum of Rs. 10,000 to be utilised for the redemption and cancellation of an equivalent amount of debentures, which are to be selected by drawing of lot. Alternatively, the company is empowered as from January 1, 1966 to purchase its own debentures on the open market. These debentures must be surrendered to the trustees for cancellation and any adjustments for accrued interest recorded in the books of account. If in any year the nominal amount of the debentures surrendered under this alternative does not amount to Rs. 10,000, then the shortfall is to be paid by the company to the trustees in cash on December 31.

The following purchases of debentures were made by the company :

	Nominal value of debentures purchased	*Purchase price per Rs. 100 of debenture*
30th September 1966	Rs. 12,000	Rs. 98
31st May, 1967	Rs. 7,500	Rs. 95 ex-interest
31 July, 1968	Rs. 11,500	Rs. 92

The company fulfilled all its obligations under the trust deed. You are required to show the accounts in the ledger of Mimek Ltd in order to record all relevant aspects of the above transactions for the three years ended December 31, 1968. Ignore costs and taxation.

(C.A. Final, England, 1969) 25·37

(*Profit on purchase of debentures : 1966 Rs. 420 ; 1967 Rs. 338 ; 1968 Rs. 977*)

26. On 1st July 1970, a company issued 2,000, 6% debentures of Rs. 100 each. The interest is payable on 30th June and 31st December every year. The company is allowed to purchase its own debentures which may be cancelled or kept or re-issued at the company's option. The company made the following purchases by cheque in the open market :

On 31st May 1971—200 debentures at Rs. 98 ex-interest

On 30th Sept. 1972—100 debentures at Rs. 97 cum-interest.

The debentures, which were purchased on 31st May, 1971 were cancelled on 31st December, 1972. All payments were made on due dates.

Give journal entries to record the above transactions (including receipts and payments) and also the relevant items in the Balance Sheet as on 31st December, 1972. [C.A. (Inter) 1975]

27. Swan Ltd has an authorized capital of Rs. 10,00,000 divided into equity shares of Rs. 10 each. Its balance sheet as at 31st December, 1975 was as follows :

Liabilities	Rs	*Assets*	Rs.
Share capital :		Fixed assets	11,40,000
Issued and fully paid up equity		Current assets	4,00,000
shares	4,00,000	Investments in own debentures	
Capital reserve	1,00,000	(Nom value Rs 1,00,000)	85,000
General reserve	1,50,000	Balance at bank	75,000
Profit and loss a/c	4,00,000		
6% debentures	4,00,000		
Sundry creditors	2,50,000		
	Rs. 17,00,000		Rs. 17,00,000

The 6% debentures were due for payment on June 30, 1976 at a premium of 5%. The company decided :

(1) to issue to the public 25,000 equity shares of Rs. 10 each at Rs. 15 per share. The issue was underwritten and the amounts due on shares were received on 1st June 1976. The underwriting commission was 5%.

(2) to redeem out of profits the debentures on 30th June, 1976 together with interest for 6 months.

(3) to give the debentureholders an option to receive either cash [illegible] new 8% debentures at par.

[illegible] of the old debentures accepted new [illegible] the company held as an investment were cancelled.

You are required to re-draft the company's balance sheet after the above-mentioned arrangements have been put through, assuming that no other transaction took place in the meantime [C A (Inter), 1976]

(*Balance sheet total Rs 17,71,000*)

SUGGESTED READING

1. *Accountancy*—William Pickles
2. *A Modern Approach to Company Accounts*—John Kellock
3. Lectures on Company Law Shah
4. *Business Accounting*, Vol II—F. Wood

4

Company Accounts—Acquisition of Business Profit Prior to Incorporation and Underwriting

I—ACQUISITION OF BUSINESS

Under the heading "acquisition of business" it is intended to discuss the accounting problems involved in the purchase of an existing business of a non-corporate body by a corporate body. The accounting problems relating to the purchase of a business of a corporate body by another corporate body have been discussed under a separate chapter titled as "Amalgamation, Absorption and Reconstruction". In order to understand the accounting complexities relating to acquisition of business it has been discussed under two sub-headings, *viz.* (*a*) when new set of books are opened ; and (*b*) when new set of books are not opened.

A—When New Set of Books are Opened

Purchase Consideration. Usually in the problems on acquisition of business the calculation of purchase consideration does not pose a serious problem. Mostly it is given in the question. Sometimes, it is calculated by adding the various forms of payment, *i.e.*, payment in shares, cash, and debentures.

Goodwill or Capital Reserve. Whenever a company purchases a business the purchase price paid for acquisition must be compared with the net assets acquired. The excess of the purchase price paid over the net assets is taken as goodwill and debited to the same. On the other hand if the net assets are more than the price paid for them, the company makes a capital profit and the same should be credited to capital reserve account. The net assets are calculated by taking the difference between the assets taken over, and liabilities taken over. It may be carefully noted that it is the *revised value* of the asset or the liability *taken over* (not the book value of asset and liability) which is important for calculating the value of net assets. If revised values are not given then book values are considered. The tedious problems relating to valuation of goodwill have been discussed separately under the chapter on valuation of goodwill.

Accounting treatment in the books of vendor. When a firm is converted into a limited company or purchased by a limited company then the firm is dissolved and it raises all the problems discussed in the chapter on dissolution of a firm. Thus it may be of benefit to recall at this stage that

the entries in the books of vendor necessary to record the sale of a business are the same which are passed at the time of dissolution of the business. However, new problem like taking over of debtors and creditors of the vendor firm by the purchasing company for collection and payment purposes respectively may sometimes arise. The accounting treatment of such a problem is discussed in the following pages under the heading "debtors and creditors not taken over".

Journal entries in the books of purchaser. Following journal entries are done in the books of a purchasing company :

1. *Entry for recording the business purchase* :

Debit Business purchase account *Credit* Vendor's account	with purchase consideration

The reader may note that the entry is similar to one passed at the time of purchasing goods. The only difference is the debit is given to the 'business purchase account' instead of 'purchase account'. Credit in both cases is given to the personal account of the seller.

2. *For recording assets and liabilities taken over* :

Debit Assets (taken over at agreed values)

Credit Liabilities (takenover at agreed values)

Credit Business purchase account (with the amount already debited to the account)

[illegible]

difference is credited to capital reserve account.

3. *For recording the payment of purchase price*

Debit Vendors account

Credit Cash, share capital or debentures (as the case may be)

The third entry is a simple one as the mode of payment is given in the question. However, the difficulty is faced when shares or debentures are issued at a discount or premium. In such a case the appropriate amount must be debited to the discount or credited to the premium account.

Alternative treatment

The first and second entries can be combined into one entry in which case the following two entries will suffice.

(1) *Debit* Assets (taken over at agreed values)

Credit Liabilities (taken over at agreed values)

Credit Vendor's account (with the purchase consideration)

(2) *Debit* Vendor's account

Credit Cash, share capital or debentures.

The first method of recording three entries is more systematic and is recommended.

Illustration 61. On 1-1-74, limited company was formed to take over an established business. It was registered with a nominal capital of Rs. 2,00,000 divided as 1,000 8% preference shares of Rs. 100 each and 1,000 equity shares of Rs. 100 each. The vendor agreed for the purchase price of Rs. 1,16,000. Towards this, 400 fully paid preference shares and 600 fully paid equity shares were allotted on 15-1-74 and the balance was paid in cash on 15-2-74.

The assets and liabilities takenover were as follows :

Buildings : Rs. 50,000 ; Motor lorry : Rs. 12,400 : Sundry debtors : Rs. 29,400 ; Stock in trade : Rs. 36,000 ; Cash at bank ; Rs. 2,200 ; Sundry creditors Rs. 31,000 ; Outstanding expenses : Rs. 1,000.

On 15-1-74, the remaining shares were issued to the public and all amounts duly received Rs. 20 per share on application ; Rs. 40 on allotment ; Rs. 20 on first call due on 15-2-74 and Rs. 20 on final call due on 15 3-74.

On 1-4-74, the company also issued Rs. 1,00,000 8% mortgage debentures at a premium of 5%.

Give necessary journal entries to record the above transactions in the books of the company and draw up its balance sheet.

(B. Com., Madras, September, 1975)

Solution :

JOURNAL (entries without narration)

			Rs.	Rs.
1974 Jan. 1	Business purchase account	Dr.	1,16,000	
	To Vendor's account			1,16,000
,,	Buildings	Dr.	50,000	
	Motor lorry	Dr.	12,400	
	Sundry debtors	Dr.	29,400	
	Stock in trade	Dr.	36,000	
	Cash at bank	Dr.	2,200	
	Goodwill (balancing figure)	Dr.	18,000	
	To Sundry creditors			31,000
	,, Outstanding expenses			1,000
	,, Business purchase			1,16,000
Jan. 15	Vendor's account	Dr.	1,00,000	
	To Preference share capital a/c			40,000
	To Equity shares capital a/c			60,000
,,	Bank account	Dr.	20,000	
	To Preference share application a/c			12,000
	To Equity share capital application a/c			8,000
,,	Preference share application account	Dr,	12,000	
	To Preference share capital account			12,000
,,	Equity share application account	Dr.	8,000	
	To Equity share capital accouut			8,000
,,	Preference share allotment account	Dr.	24,000	
	To Preference share capital account			24,000
,,	Equity share allotment account	Dr.	16,000	
	To Equity share capital account			16,000

Jan. 15	Bank account Dr. To Preference share allotment account To Equity share allotment account		40,000	 24,000 16,000
Feb. 15	Preference share I call account Dr. To Preference share capital account		12,000	 12,000
"	Equity share I call account Dr. To Equity share capital account		8,000	 8,000
"	Bank Account Dr. To Preference share I call account To Equity share I call account		20,000	 12,000 8,000
"	Vendors account Dr. To Bank account		16,000	 16,000
Mar. 15	Preference share II and final call account Dr. To Preference share capital account		12,000	 12,000
"	Equity share II and final call account Dr. To Equity share capital account		8,000	 8,000
"	Bank account Dr. To Preference share II and final call account To Equity share II and final call account		20,000	 12,000 8,000
April 1	Bank account Dr To 8% Debentures account To Premium on debentures account		1,05,000	 1,00,000 5,000

BALANCE SHEET

as on 1st April 1974

Liabilities	Rs	*Assets*	
Authorized, issued, subscribed, called up and paid up capital:		Goodwill	18,000
1,000 8% Preference shares of Rs 100 each	1,00,000	Buildings	50,000
1,000 Equity share of Rs 100 each	1,00,000	Motor-lorry	12,400
Premium on debentures	5,000	Sundry debtors	29,400
8% Mortgage debentures	1,00,000	Stock-in-trade	36,000
Sundry creditors	31,000	Cash at bank	1,91,200
Outstanding expenses	1,000		
	Rs. 3,37,000		Rs 3,37,000

* Note: The date regarding allotment and the due date for allotment money have not been given. So these transactions have also been shown as on 15th January, 1974.

*Distribution of shares between vendors Distribution of shares received by the vendors from the purchasing company as a part satisfaction of purchase consideration poses a serious problem. The following are the guiding points for the help of students.

*For students preparing for professional and post graduate examinations

(*a*) If it is specifically agreed to among the partners to distribute shares in a particular ratio then they must be distributed in that ratio ;

(*b*) If partners are interested in maintaining their right of getting dividend from the company in the old profit-sharing ratio then preference as well as equity shares must be distributed in the old profit-sharing ratio ;

(*c*) Distribution of shares in the profit-sharing ratio serves only in maintaining the right of getting the profits in the old profit-sharing ratio. It does not, however, protect the right of repayment of capital in priority over the other partner. Thus when repayment of capital is to be guaranteed than the capital which is to be protected must be discharged by allotting preference shares. The rate of dividend on these preference shares may correspond to the rate of interest on capital, if any ; and

(*d*) If there is a loan advanced by a partner then it should be satisfied by allotting first preference shares. This guarantees the repayment of loan (now converted into share capital) in priority over any other partners capital (now converted into shares).

Illustration 62. *A*, *B* and *C* are in partnership sharing profits in the ratio of 2 : 2 : 1, after providing interest on capital at 6% p.a. The firm was converted into a limited company and assets and liabilities were sold to the company at book values with the exception of goodwill, for which the company agreed to pay Rs. 8,000 more than the book value and machinery which was taken at Rs. 1,000 less than the book value. The capitals of *A B*, and *C* at the date of purchase by the limited company were Rs. 10,000, Rs. 6,000 and Rs. 5,000.

You are required to show the working relating to the allocation of shares to the partners in payment of purchase price so as to preserve the same rights between themselves as existed in the partnership both in respect of—

(*i*) repayment of capital, and
(*ii*) distribution of profits.

Solution :

(*i*) *Calculation of total purchase consideration* :

	Rs.
Assets taken over at book values (this is equal to total of capitals, *i.e.*, Rs. 10,000 + Rs. 6,000 + Rs. 5,000)	21,000
Add Increase in value of goodwill	8,000
	29,000
Less Decrease in value of machinery	1,000
Value of net assets which is also net purchase consideration	Rs. 28,000

(*ii*) *Distribution of shares among partners* :

The right of return of capital of a partner is maintained only when he gets back that portion of his capital which has been contributed by him over that limit which is required by the profit sharing ratio. Thus in order to maintain the right of return of capital, it is essential to allot

'first preference shares' to a partner contributing excess capital. For the rest of capital either equity shares or 'second prefence shares' can be issued. The following statement has been prepared to determine the excess portion of capital contributed by the partner. The technique is the same which is used for preparing a statement for piecemeal distribution.

STATEMENT SHOWING EXCESS PORTION OF CAPITAL

	Total	*A*	*B*	*C*
	Rs	Rs	Rs	Rs.
Capital as per balance sheet	21,000	10,000	16,000	5,000
Add Profit on revaluations of goodwill (in profit and loss ratio)	+8,000	+3,200	+3,200	+1,600
	29,000	13,200	9,200	6,600
Less Loss on machinery Rs. 1,000 (in profit and loss ratio)	−1,000	—400	—400	—200
Adjusted capitals	28,000	12,800	8,800	6,400
Let instalment be NIL. Now total loss is Rs. 28,000 This is distributed in profit and loss ratio	−28,000	—11,200	—11,200	—5,600
Balance (excess capitals)	Nil	+1,600	—2,400	+800

The above solution reveals that even if there is no recovery, *A* and *C* retain the claim of getting Rs 1,600 and Rs. 800 respectively which *B* should bring (unless he is insolvent.) Thus in any case *A* and *C* must get this amount in priority over *B*. Now the problem is that *inter se A* and *C* who should get first and what should be that amount. Here, the amount left is in profit-sharing ratio, *i.e.*, 2 : 1 and hence they maintain same rights. The distribution of shares, thus, will be as follows :

	Rs.
A should get 6% First preference shares	1,600
C should also get 6% First preference shares	800
A should get for the remaining unpaid capital (Rs. 12,800—Rs. 1,600) 6% Second preference shares	11,200
B should get 6% Second preference shares	8,800
C should get 6% Second preference shares (Rs. 6,400—Rs 800)	5,600
	Rs. 28,000

Howevers if partner, are not interested in maintaining the same rat of interest they can be given equity shares also for the remaining capita *i.e.*, capital left after giving preference shares for the excess portion.

Illustration 63.

The Alpha Ltd acquired the running business of *A* and *B* on the basis of the following balance sheet :

Liabilities		Rs.	*Assets*	Rs.
Creditors		11,000	Cash	2,000
General reserve		5,000	Stock	18,000
Capitals :			Debtors	10,000
A	25,000		Fixtures	1,000
B	20,000		Plant	30,000
		45,000		
		Rs. 61,000		Rs. 61,000

The purchase price was fixed at Rs. 40,000 to be paid in 1,000 shares of Rs. 10 each at a market value of Rs. 12 per share and the balance in cash. The Alpha Limited, however, took plant at 10% less and fixtures at 5% less. It was decided among partners that shares received from the purchasing company as a part settlement of purchase consideration be distributed in such a way that their rights in the old firm may be maintained in the company also. They were sharing profits and losses equally. You are required to (*i*) give journal entries in the books of Alpha Ltd., and (*ii*) give journal entries in the books of the firm.

Solution :

JOURNAL OF ALPHA LIMITED

		Rs.	Rs.
Business purchase account	Dr.	40,000	
To Vendors account			40,000
(Being the purchase consideration agreed upon for acquiring the business of *A* and *B*)			
Cash account	Dr.	2,000	
Stock account	Dr.	18,000	
Debtors account	Dr.	10,000	
Fixtures account	Dr.	950	
Plant account	Dr.	27,000	
To Creditors account			11,000
To Capital reserve account (1)			6,950
To Business purchase account			40,000
(Being the acquisition of assets and liabilities as a result of business purchase)			
Vendors account	Dr.	40,000	
To Share capital account			10,000
To Share premium account			2,000
To Cash account			28,000
(Being the payment of purchase price by the issue of 1,000 shares of Rs. 10 each at a premium of Rs. 2 per share and the balance in cash)			

TUTORIAL NOTES

(1) Capital reserve is the difference between total assets and total of purchase consideration and creditors.

(2) Assets and liabilities in the books of purchasing company are recorded at revised values, if any.

JOURNAL OF *A* AND *B*

		Rs	Rs.
Realisation account	Dr.	61,000	
To Cash account			2,000
To Stock account			18,000
To Debtors account			10,000
To Fixtures account			1,000
To Plant account			30,000
(Transfer of assets taken over by the company to realisation account)			
Creditors account	Dr.	11,000	
To Realisation account			11,000
(Transfer of liabilites to realisation account)			
Alpha Limited account	Dr.	40 000	
To Realisation account			40,000
(Transfer of purchase consideration debited to Alpha Limited)			
A's Capital account	Dr.	5,000	
B's Capital account	Dr.	5,000	
To Realisation account			10,000
(Amount of loss on sale of firm to partners' capital accounts in the profit-sharing ratio)			
Cash account	Dr.	28,000	
Share in Alpha Ltd. account	Dr	12,000	
To Alpha Ltd account			40,000
(Being receipt of purchase consideration from Alpha Ltd)			
General reserve account	Dr	5,000	
To *A*'s capital account			2,500
To *B*'s capital account			2,500
A's Capital account	Dr.	22,500[1]	
To Cash account			16,500
To Shares in Alpha Ltd account			6,000
(Being payment of capital)			
B's Capital account	Dr.	17,500[1]	
To Cash account			11,500
To Share in Alpha Ltd account			6,000
(Being payment of capital)			

[1]For the distribution of cash and shares see explanations on the next page.

STATEMENT SHOWING DISTRIBUTION OF SHARES AND CASH

	Total Rs	*A* Rs	*B* Rs.
Balance as per balance sheet	45,000	25,000	20,000
Add General reserve	5,000	2,500	2,500
	50,000	27,500	22,500
Less Loss on realisation	−10,000	−5,000	−5,000
Final balance to be repaid	40,000	22,500	[illegible]
1st instalments If realised Nil			
Maximum loss Rs 40,000 to be distributed in profit-sharing ratio, *i e*, equally	−40,000	−20,000	[illegible]
	Nil	+2,500	[illegible]

In order to maintain the right in the profit sharing ratio, it is essential that *B* should bring Rs. 2,500 and hand it over to *A*. Thus *A*'s capital will be reduced to Rs. 20,000 and that of *B* increased to Rs. 20,000. But *B* is not ready to contribute anything. If *A* is paid Rs. 5,000 (*i.e.*, Rs. 2,500+Rs. 2,500) then his capital is reduced from Rs. 22,500 to Rs. 17,500 which is equal to *B*'s capital. Afterwards, if liquidation takes place, both will suffer equally, *i.e.*, in the ratio in which they agreed at the time of formation of the firm. Thus payment may be made as follows :

	A	*B*
	Rs.	Rs.
Capital to be paid	22,500	17,500
First Rs. 5,000 out of cash to *A*	5,000	—
	17,500	17,500
Remaining cash equally, *i.e.*, Rs. 28,000—Rs. 5,000=Rs. 23,000	11,500	11,500
Balance to be paid in shares	6,000	6,000
Shares of Rs. 12,000 distributed equally	6,000	6,000

Thus *A* receives Rs. 16,500 in cash, and 6,000 in shares and *B* receives Rs. 11,500 in cash, and 6,000 in shares.

Illustration 64.

Shellfish Ltd was incorporated with an authorised capital of Rs. 75,000 divided into ordinary shares of 50 paise each to take over the existing business (including cash) of Crab and Prawn, on 31st December 1971.

At that date the balance sheets of Crab and Prawn showed the following :

	Crab Rs.	*Prawn* Rs.		*Crab* Rs.	*Prawn* Rs.
Proprietors' capital accounts	35,000	27,500	*Fixed assets* :		
Sundry creditors	7,400	12,300	Freehold property, at cost	14,950	10,900
Bank overdraft	10,000	—	Plant & machinery, at cost *less* depreciation	14,500	10,000
			Patents, at cost	800	1,000
			Amount c/f	30,250	21,900

			Amount b/p	30,250			21,900
			Current assets :				
			Stock on hand	9,750		6,500	
			Sundry debtors	12,400		7,400	
			Balance at bank	—	22,150	4,000	17,900
	Rs. 52,400	39,800			Rs. 52,400		39,000

You are also given the following information :

(1) The total consideration to be paid to each proprietor is the amount Shellfish Ltd. would expect to invest at 15% per annum to yield the average profits of the past three years.

For this purpose the profits have been :

	Crab Rs.	*Prawn* Rs.
Year ended 31st December, 1969	5,000	3,100
Year ended 31st December, 1970	6,750	5,400
Year ended 31st December, 1971	8,500	7,250

(2) [illegible] as [illegible] ar, [illegible]

(3) The fixed assets are to be revalued as follows :

	Crab Rs.	*Prawn* Rs.
Freehold property	22,500	16,000
Plant and machinery	10,370	8,020 .
Patents	500	750

(4) *Provision is to be made for :*

(*i*) Bad stock amounting to Rs. 1,500 in Crab's business and Rs. 500 in Prawn's.

(*ii*) 5% on debtors for bad and doubtful debts.

You are required (*a*) to calculate the shares and loan stock to be issued to Crab and Prawn respectively and (*b*) to prepare a balance sheet of Shellfish Ltd. showing the position immediately after the acquisition.

(C. A. Inter., England, 1972)

Solution : Sellfish Ltd.

(*a*) CALCULATION OF SHARES AND LOAN STOCK TO BE ISSUED

	Crab Rs.	*Prawn* Rs.
Average profit of three years : Three years' profit	20,250	15,750
Average	Rs. 6,750	Rs. 5,250
Purchase consideration on basis of 15 per cent per annum yield	$\frac{6,750 \times 100}{15}$ = Rs. 45,000 ;	$\frac{5,250 \times 100}{15}$ = Rs. 35,000

	Rs.	Rs.	Rs.	Rs.
Assets and liabilities taken over :				
Freehold property		22,500		16,000
Plant and machinery		10,370		8,020
Patents		500		750
Stock on hand	9,750		6,500	
Less Provision for bad stock	1,500		500	
		8,250		6,000
Debtors	12,400		7,400	
Less Provision for bad and doubtful debts	620		370	
		11,780		7,030
Balance at bank		—		4,000
		53,400		41,800
Deduct Creditors	7,400	—	—	12,300
Bank overdraft	10,000			—
		17,400	—	—
		36,000		29,500
Balance, goodwill		9,000		5,500
		Rs. 45,000		Rs. 35,000

	No. of shares	Amount Rs.	No. of shares	Amount Rs.
Issued at par :				
Ordinary shares of 50 paise each, fully paid	67,500	33,750 (3/4)	52,500	26,250 (3/4)
8 per cent unsecured loan stock, 1982-86		11,250 (1/4)		8,750 (1/4)
		Rs. 45,000		Rs. 35,000

(*b*) BALANCE SHEET

as at December 31, 1971

	Rs.	Rs.	Rs.
Capital employed			
Share capital			
Authorised : 1,50,000 ordinary shares of 50 paise each			75,000
Issued and fully paid : 1,20,000 ordinary shares of 50 paise each			60,000
8 per cent unsecured loan stock, 1982-86			20,000
			Rs. 80,000
Represented by :			
Fixed assets at valuation :			
Freehold property		38,500	
Plant and machinery		18,390	
Patents		1,250	
			58,140
Goodwill			14,500
Current assets :			
Stock Rs. (16,250—2,000)		14,250	
Debtors Rs. (19,800—990)		18,810	
Bank balance		4,000	
		37,060	

Less current liabilities :

Creditors	19,700		
Bank overdraft	10,000		
		29,700	7,360
			Rs. 80,000

Debtors and creditors taken over on behalf of vendors. Quite often a company acquiring the business does not take over the trade debtors and trade creditors of the vendor but agrees to collect book debts and pay for the creditors out of the proceeds thereof. For this work the company gets some commission which is often based on the percentage of the amount collected and paid. Since the company does this job on behalf of the vendor, any loss on account of bad debts and discount allowed to debtors and also any gain on account of discount received from creditors are passed on to vendors. The following accounting entries are passed :

Books of Vendors

(1) *For closing debtors account* :

Debit Purchasing company suspense account
Credit Debtors account

It may be noted that a new account under the title 'purchasing company suspense account' is opened and this must not be confused with the 'purchasing company's account' which is opened in connection with the sale of business.

(2) *For closing provision for doubtful debts account* :
Debit Provision for doubtful debts account
Credit Purchasing company suspense account

(3) *For closing creditors account* :
Debit Creditors account
Credit Purchasing company suspense account

After having transferred debtors and creditors to purchasing company suspense account, the vendors shall record the transactions for the receipt of cash from the purchasing company after the deduction of their commission and after the various allowances which they might have allowed or received. Journal entries for these will be made only on hearing from the purchasing company. These may be as follows :

(4) *For recording bad debts, discount allowed to debtors, any omitted liability, commission allowed to purchasing company or any other type of loss :*

Debit Profit and loss adjustment account
Credit Purchasing company suspense account

(5) *For recording any recovery of past bad debts, discount received from creditors, or any other gain*

Debit Purchasing company suspense account
Credit Profit and loss adjustment account

(6) *For recording the final payment received from the purchasing company* :

Debit Cash account
Credit Purchasing company suspense account

(7) Profit and loss adjustment account will be closed by transferring to capital account of the partners in the profit-sharing ratio. Final payment to partners will be made.

Books of Purchasing Company. Journal entries in the books of purchasing company will be as follows :

1. *At the time of acquisition of debtors for collection purposes* :
   Debit Vendors' debtors account
   Credit Vendors' suspense account

Journal entry is done with the gross amount of debtors. No cognizance is taken of provision of doubtful debts.

2. *At the time of acquisition of creditors for payment purposes* :
   Debit Vendors' suspense account
   Credit Vendors' creditors account
3. *When amount is collected* :
   Debit Cash account
   Credit Vendors' debtors account
4. *When discount is allowed* :
   Debit Vendors' suspense account
   Credit Vendors' debtors account
5. *When debts become unrecoverable* :
   Debit Vendors' suspense account
   Credit Vendors' debtors account
6. *When past bad debts are recovered* ;
   Debit Cash account
   Credit Vendors suspense account
7. *When payment to creditors is made* :
   Debit Vendors creditors account
   Credit Cash account
8. *When discount is recieved* :
   Debit Vendor creditors account
   Credit Vendors suspense account
9. *When ommitted creditors are paid* :
   Debit Vendors suspense account
   Credit Cash account
10. *When commission for the services rendered is charged* :
    Debit Vendors suspense account
    Credit Commission account

Liabilities	Rs	*Assets*	Rs.
Sundry creditors	21,250	Furniture	3,320
Patel's capital	34,000	Stock	15,380
Chowdary's capital	17,000	Debtors	48,450
		Cash	5,100
	Rs. 72,250		Rs. 72,250

A limited company with an authorised capital of Rs. 2,89,000 divided into 1,700 ordinary shares of Rs. 100 each and 1,190 6% preference shares of Rs. 100 each was registered to purchase the above business on the following terms :

(*a*) Furniture and stock were purchased at balance sheet values less 10%.

(*b*) Goodwill of the firm was valued at Rs. 10,120.

(*c*) The firms debtors, cash and creditors were not to be taken over by the company, but that the company was to undertake to collect the book debts and discharge the liabilities of the vendors. as an agent, for which service the company was to be paid 3% on all collections from the vendors' debtors and 2% on cash distribution to vendors' creditors. The commission so earned was to be utlised by the company in wiping out the goodwill.

(*d*) The purchase price was to be paid in fully paid ordinary and 6% preference shares in the proportion of 3 : 2 at a premium of Rs. 10 per share.

The company received during the first two months after the purchase of business Rs. 36,500 from vendors debtors including Rs. 3,500 from a person whose account was written off as bad in the firm's books. Out of the money so received the company paid Rs. 21,000 in full discharge of vendor's creditors.

Show the journal entries recording the above transactions in the books of the above company and give the opening balance sheet of the company, assuming that the remaining ordinary and preference shares were issued to the public at a premium of Rs 10 per share. All the shares were paid up in full.

Solution :

JOURNAL

			Rs.	Rs.
1956 Dec. 31	Business purchase account	Dr.	26,950	
	To M/s Patel and Chowdary account			26,950
	Goodwill account	Dr.	10,120	
	Furniture account	Dr.	2,988	
	Stock in trade account	Dr.	13,842	
	To Business purchase account			26,950
	Vendors debtors account	Dr.	48,450	
	To Vendor's creditors account			21,250
	Vo Vendor's suspense account			27,200
	M/s Patel & Chowdary account	Dr.	26,950	
	To Equity share capital account (1)			14,700
	To 6% Preference share capital account (1)			9,800
	To Share premium account (1)			2,450

1957 Jan. 1 To Feb. 28	Bank account	Dr.	36,500	
	To Vendors debtors account			33,00
	To Vendors suspense account			3,50
	Vendor's creditors account	Dr.	21,250	
	To Vendors suspense account			25
	To Bank account			21,0(
	Vendors suspense account	Dr.	15,500	
				1,51.
				13,98:
			2,90,950	
				1,70,83
				1,20,12
			1,70,830	
				1,55,30
				15,53
			1,20,120	
				1,09,20
				10,92
			1,515	
				1,51

TUTORIAL .

NOTES: (1) Number of shares to be issued to vendors:

Purchase consideration :

	Rs.	Rs.
Furniture	3,320	
Less 10%	332	
		2,988
Stock	15,380	
Less 10%	1,538	
		13,842
Goodwill as agreed		10,120
	Total	26,950

Three fifths of the purchase consideration to be satisfied by the issue of equity shares. It works out to

Rs. 26,950 × 3/5 = Rs. 16,170.

Value of each share is Rs 110 (Face value Rs. 100 plus premium Rs. 10)

Number of equity shares to be issued $\frac{\text{Rs. } 16170}{\text{Rs. } 110} = 147$.

		Rs.
Share capital account 147 × Rs. 100		14,700
Share premium account 147 × Rs. 10		1,470
	Total	Rs. 16,170

Two-fifths (2/5) of the purchase consideration to be satisfied by the issue of preference shares. It works out to Rs. 26,950 × 2/5 = Rs. 10,780.

Issue price of each share is Rs 110 (face value Rs. 100 plus Rs. 10 premium).

Liabilities	Rs	Assets	Rs.
Sundry creditors	21,250	Furniture	3,320
Patel's capital	34,000	Stock	15,380
Chowdary's capital	17,000	Debtors	48,450
		Cash	5,100
	Rs. 72,250		Rs. 72,250

A limited company with an authorised capital of Rs. 2,89,000 divided into 1,700 ordinary shares of Rs. 100 each and 1,190 6% preference shares of Rs. 100 each was registered to purchase the above business on the following terms :

(*a*) Furniture and stock were purchased at balance sheet values less 10%.

(*b*) Goodwill of the firm was valued at Rs. 10,120.

(*c*) The firms debtors, cash and creditors were not to be taken over by the company, but that the company was to undertake to collect the book debts and discharge the liabilities of the vendors. as an agent, for which service the company was to be paid 3% on all collections from the vendors' debtors and 2% on cash distribution to vendors' creditors. The commission so earned was to be utlised by the company in wiping out the goodwill.

(*d*) The purchase price was to be paid in fully paid ordinary and 6% preference shares in the proportion of 3 : 2 at a premium of Rs. 10 per share.

The company received during the first two months after the purchase of business Rs. 36,500 from vendors debtors including Rs. 3,500 from a person whose account was written off as bad in the firm's books. Out of the money so received the company paid Rs. 21,000 in full discharge of vendor's creditors.

Show the journal entries recording the above transactions in the books of the above company and give the opening balance sheet of the company, assuming that the remaining ordinary and preference shares were issued to the public at a premium of Rs 10 per share. All the shares were paid up in full.

Solution :

JOURNAL

1956			Rs.	Rs.
Dec. 31	Business purchase account	Dr.	26,950	
	To M/s Patel and Chowdary account			26,950
	Goodwill account	Dr.	10,120	
	Furniture account	Dr.	2,988	
	Stock in trade account	Dr.	13,842	
	To Business purchase account			26,950
	Vendors debtors account	Dr.	48,450	
	To Vendor's creditors account			21,250
	Vo Vendor's suspense account			27,200
	M/s Patel & Chowdary account	Dr.	26,950	
	To Equity share capital account (1)			14,700
	To 6% Preference share capital account (1)			9,800
	To Share premium account (1)			2,450

7	Bank account	Dr.	36,500	
. 1 To	To Vendors debtors account			33,000
b. 28	To Vendors suspense account			3,500
	Vendor's creditors account	Dr.	21,250	
	To Vendors suspense account			250
	To Bank account			21,000
	Vendors suspense account	Dr.	15,500	
	To Commission account			1,515
	To Bank account (2)			13,985
	Bank account	Dr.	2,90,950	
	[illegible]			1,70,830
	[illegible]			1,20,120
	[illegible]	Dr.	1,70,830	
	[illegible]			1,55,300
	[illegible]			15,530
	[illegible]		1,20,120	
	[illegible]			1,09,200
	[illegible]			10,920
	[illegible]		1,515	
ORIAL				1,515

ES: (1) Number of shares to be issued to vendors:

Purchase consideration :

	Rs.	Rs.
Furniture	3,320	
Less 10%	332	
		2,988
Stock	15,380	
Less 10%	1,538	
		13,842
Goodwill as agreed		10,120
Total		26,950

Three fifths of the purchase consideration to be satisfied by the ue of equity shares. It works out to

Rs. 26,950 × 3/5 = Rs. 16,170.

Value of each share is Rs 110 (Face value Rs. 100 plus premium . 10)

Number of equity shares to be issued $\frac{\text{Rs. } 16170}{\text{Rs. } 110} = 147.$

	Rs.
Share capital account 147 × Rs. 100	14,700
Share premium account 147 × Rs. 10	1,470
Total	Rs. 16,170

Two-fifths (2/5) of the purchase consideration to be satisfied by the ue of preference shares. It works out to Rs. 26,950 × 2/5 = Rs. 10,780.

Issue price of each share is Rs. 110 (face value Rs 100 plus Rs. 10 emium).

Number of preference shares to be issued Rs. $\frac{10,780}{110}=98$.

		Rs.
Preference share capital account	98×100	9,800
Share premium account	98× 10	980
	Total	Rs. 10,780

(2) Amount paid to vendors is calculated as given below :

		Rs.
Vendors' debtors including debts written off collected		36,500
Less Payment to vendors' creditors	Rs. 21,000	
Less Commission due from them	1,515	22,515
Net amount paid		Rs. 13,985

BALANCE SHEET OF.........CO. LTD.

as on 28th February, 1957

Liabilities	Rs.	*Assets*	Rs.
Share Capital :		Goodwill	8,605
Authorised, issued, subscribed and paid up :		Furniture	2,988
1,190 Preference shares of Rs. 100 each	1,19,000	Current assets :	
1,700 Equity shares of Rs. 100 each	1,70,000	Vendor's debtors	15,450
Share Premium account	28,900	Stock in trade	13,842
Vendor's Suspense account[1]	15,450	Cash at Bank[2]	2,92,465
	Rs. 3,33,350		Rs. 3,33,350

WORKINGS ;

(1) VENDOR'S SUSPENSE ACCOUNT

	Rs.		Rs.
To Vendors creditors account	21,250	By Vendor's debtors account	48,450
To Commission account	1,515	By Bank account debt written off collected	3,500
To Bank account	13,985	By Vendors creditors account discount	250
To Balance c/d	15,450		
	Rs. 52,200		Rs. 52,200

(2) BANK ACCOUNT

	Rs.		Rs.
To Equity share application a/c	1,70,830	By Vendors creditors account	21,000
To Preference share application account	1,20,120	By Vendor's suspense account	13,985
To Vendors debtors account	33,000	By Balance c/d	2,92,465
To Vendors suspense account—bad debt recovered	3,500		
	Rs. 3,27,450		Rs. 3,27,450

B—When same set of books are continued

In the preceding pages the accounting treatment of business acquisition was done under the presumption that new set of books are opened. However, if the company decides to continue with the same set of books, following accounting treatment is recommended :

1. *Revalue assets and liabilities.* There is no necessity of having a realisation account for closing the accounts of assets and liabilities. Since the same books are continued, accounts are kept alive. If the purchasing company agrees to take some of the assets and liabilities at revised values, then the entries for bringing them to their agreed values are done through revaluation account. Entries are done in the same way as stated in the chapter on "admission of a partner".

2. *Close revaluation account.* Transfer the balance of revaluation account to capital accounts. (In case of partnership in the profit-sharing ratio).

3. *Close assets and liabilities not taken over.* This is done by transferring them to capital accounts of partners in the *profit-sharing ratio*. However, if it is found that an asset is worth its book value (of which there is a remote possibility) then it can be transferred to capital accounts in the ratio of final claim. *It may be noted very carefully that no asset should be [illegible] among the partners in the ratio of final claim until it is [illegible] to fluctuate.* The exam- [illegible] which are distributed in the ratio of final claim.

4. *Close reserves.* Transfer undistributed profits and losses to capital accounts in the profit-sharing ratio.

5. *Close capital accounts.* Close the adjusted balances of capital accounts. For this debit capital accounts and credit cash or shares or debentures accounts.

6. Now prepare the revised balance sheet.

Illustration 67.

The following is the balance sheet of M/s Ram Prashad Ram Narain as on 31st December, 1969 :

BALANCE SHEET
as on 31st Dec., 1969

	Rs		Rs.
Creditors	10,000	Land and buildings	50,000
Bills payable	45,000	Machinery	40,000
Capitals :		Fixtures	20,000
Ram Prashad	60,000	Stock-in-trade	10,000
Ram Narain	40,000	Bill receivable	5,000
		Debtors	25,000
		Cash in hand and at bank	5,000
	Rs. 1,55,000		Rs. 1,55,000

On 1st January, 1970, the above business was purchased by the Ra[illegible] Ltd for Rs 1,50,000 to be discharged by issuing shares of Rs. 50 eac[illegible]

credited at Rs. 40 paid up. The company did not take over fixtures and bills payable. It was decided that the company would take land and buildings at Rs. 67,500, machinery at Rs. 35,000. A provision for doubtful debts was also made at 5% on sundry debtors. There is a claim on account of bills discounted Rs. 3,000 which the company agreed to take over. But the company refused to take over a worker's claim of Rs. 1,000 on account of accident. Bills payable were taken over by Ram Prashad at agreed value of Rs 40,000. Fixtures were disposable at Rs. 17,000. You are required to make journal entries (including that for cash transactions) in the books of the company presuming the company decides to continue the same set of books.

Solution :

JOURNAL OF RAM LTD.

		Rs.	Rs.
Step 1. Revalue assets and liabilities			
Bills payable account	*Dr.*	5,000	
Land and buildings account	*Dr.*	17,500	
To Revaluation account			22,500
Revaluation account	*Dr.*	13,250	
To Machinery account			5,000
To Provision for doubtful debts account			1,250
To Claim for bills discounted account			3,000
To Claim for accident account			1,000
To Fixtures account			3,000
Goodwill account (1)	*Dr.*	16,750	
To Ram Prashad's capital account			8,375
To Ram Narain's capital account			8,375
Profit on revaluation of goodwill is as follows :			
Step 2. Close Revaluation Account			
Revaluation account[1]	*Dr.*	9,250	
To Ram Prashad			4,625
To Ram Narain			4,625

Profit on revaluation of goodwill (continued from the entry above):

		Rs.	Rs.
Assets taken over—Building		67,500	
Machinery		35,000	
Stock		10,000	
Bills receivable		5,000	
Debtors		25,000	
Cash		5,000	
Total Assets c/f.		Rs. 1,47,500	
Total Assets	b/f		1,47,500
Less Liabilities taken over—			
Creditors		10,000	
Contingent liability on bills discounted		3,000	
Provision for doubtful debts		1,250	
			14,250
Net assets taken over			Rs. 1,33,250
Price paid for business			1,50,000
∴ Goodwill is (Rs. 1,50,000 —Rs 1,33,250)			Rs. 16,750

		Rs.	Rs.
Step 3. Close assets and liabilities not taken over			
Claim for accident account	Dr.	1,000	
To Ram Prashad			681
To Ram Narain			319
In the ratio of final claim. *i.e.*, 113 : 53)			
Ram Prashad	Dr.	11,572	
Ram Narain	Dr.	5,428	
To Fixtures account			17,000
(In the ratio of final claim, *i.e.*, 113 : 53)			
Bills payable account	Dr.	40,000	
To Ram Prashad			40,000
Step 4. Pay capitals	Dr.		
Ram Prashad (2)	Dr.	1,02,109	
Ram Narain		47,891	
To Share capital account			1,50,000
(Issue of 3,750 shares of Rs. 50 each Rs. 40 paid up)			

TUTORIAL NOTES

(1) In the absence of a specific agreement profits are distributed equally

(2) The final payment to be made is ascertained by preparing ledger accounts of the two partners :

Ratio for final claim has been calculated as

	Ram Prasad	Ram Narain
	Rs.	Rs.
Balance	60,000	40,000
Revaluation profit	4,625	4,625
Bills payable	40,000	—
Goodwill	8,375	8,375
Total	Rs. 1,13,000	53,000
Ratio	113	53

Illustration 68.

The following is the trial balance of Harish Ltd as on 31st December, 1969 :

	Rs.	Rs.
Harish—Capital		20,000
Sundry fixed assets	8,000	
Debtors	10,000	
Stock	12,000	
Cash	2,000	
Sundry liabilities		8,000
Profit and loss account		4,000
Rs.	32,000	32,000

It is ascertained that on 1st March 1969 the business had been transferred to a limited company as from 1st January, 1969 in consideration of Rs. 6,000 cash and Rs. 24,000 shares, the company taking over assets and liabilities at their book values No entries relating to transfer had been made in the books so far, nor any had been made in Harish's capital account since 1st January, except that he had been debited with Rs. 6,000 cash paid to him as part of the purchase consideration.

You are required to give journal entries assuming the company decided to retain the same set of books. Also prepare balance sheet of Harish Ltd.

Solution :

(1) Since on 31st December Harish's capital account shows the credit balance of Rs. 20,000 after giving the debit of Rs. 6,000, the balance in the beginning, *i.e.*, January 1, 1969 must have been Rs. 26,000.

(2) Assuming Rs. 4,000 profit shown in the trial balance is the profit made during the year, the net assets of the firm must be equal to capital of Harish on that date, *i.e.*, Rs. 26,000.

(3) When company agreed to pay Rs. 30,000 for the net assets of Rs. 26,000, the Rs. 4,000 difference must be treated as the amount paid for goodwill.

(4) Since no entries had so far been made, the entry for recording the goodwill was also not given effect to. This will now be done as under :

Goodwill account	Dr. Rs. 4,000	
To Harish's capital account		Rs. 4,000

Harish's capital now stands at Rs. 24,000.

(5) Since the company has decided to continue the same set of books no entries need be done for closing the books. Also, all other assets and liabilities had been taken over at book values, it does not involve any adjustment in the accounts of assets, liabilities and capitals.

(6) Since Harish has already been paid cash and it was duly recorded, the entry for issuing shares need be done now. This may be as under—

Harish's capital (new balance)	Dr. Rs. 24,000	
To Share capital account		Rs. 24,000

This closes the capital account of Harish and opens the share capital account. Now balance sheet may be drawn.

BALANCE SHEET OF HARISH LTD.

as on 31st December 1969

	Rs.		Rs.
Share capital	24,000	Goodwill	4,000
Profit and loss	4,000	Sundry fixed assets	8,000
Sundry creditors	8,000	Stock	12,000
		Debtors	10,000
		Cash	2,000
	Rs. 36,000		Rs. 36,000

Debtors and creditors not taken over when same set of books are retained. After having understood the accounting treatment of debtors and creditors not taken over under the presumption that the purchasing company is opening a new set of books, we proceed to take up the accounting complexities in its treatment when the new company decides to retain the same set of books, *i.e.*, same accounts for debtors and creditors also. The necessary procedure needed is summarised as follows :

(1) Do not close debtors and creditors accounts as the same set of books are retained.

(2) Open two *additional* accounts one for debtors and another for creditors under the headings 'Debtors suspense account' and 'Creditors suspense account'.

(3) The capital account of the seller as shown in the balance sheet has already got the necessary credit on account of debtors appearing in the balance sheet. Since the purchasing company is not purchasing these debtors, this credit to the vendor's capital account must be reduced without cancelling debtors account. This is done with the help of debtors suspense account. Following is the journal entry ;

Debit Vendor's account
Credit Debtors suspense account

In the same way adjust vendor's account in the light of creditors account. For this the following journal entry is passed :

Debit Creditors suspense account
Credit Vendor's account

(4) Collect cash from debtors, Entry is :

(*i*) *Debit* Cash account
(with actual cash received)
Debit Discount allowed account
(with actual discount allowed)
Credit Debtors account
(not debtors suspense account)

Pass one more journal entry :

(*ii*) *Debit* Debtors suspense account
(cancels the credit in debtors suspense account)
Credit Vendor's account
(gives a fresh credit to vendor for the amount collected on his behalf)
Credit Discount allowed account
(cancels the debit in discount allowed account)

(5) Pay creditors :

(*i*) *Debit* Creditors account
(with the total amount)
Credit Cash account
(with actual payment)
Credit Discount received account
(with discount received)

Pass one more journal entry :

(*ii*) *Debit* Vendor's account
(gives fresh debit for the amount paid on his behalf)
Debit Discount received account
(cancels the credit in discount received. account)

Credit Creditors suspense account
(cancels the debit in creditors suspense account)

(6) Pay the net amount to the vendor.

Illustration 69.

X Ltd. purchased the business of *X* and decided to continue the same set of books. *X* Ltd., however, did not take its debtors of Rs. 8,000 and creditors of Rs. 6,000 but it promised to collect and pay them. The company collected all debts subject to a discount of Rs. 300 and bad debts of Rs. 100 and paid all creditors subject to a discount of Rs. 150.

You are required to give journal entries.

Solution :

JOURNAL OF *X* LTD.

		Rs.	Rs.
Step 1. Adjust vendors account by opening new suspense accounts :			
X s'account	Dr.	8,000	
To Debtors suspense account			8,000
Creditors suspense account	Dr.	6,000	
To *X* s'account			6,000
Step 2. (i) Collect cash from debtors :			
Cash account	Dr.	7,600	
Bad debts account	Dr.	100	
Discount account	Dr.	300	
To Debtors account (cancels the debtors so far existing)			8,000
(ii) Cancel debtors suspense, bad debt, discount accounts :			
Debtors suspense account (to cancel the credit)	Dr.	8,000	
To Bad debt account (to cancel the debit)			100
To Discount account (to cancel the debit)			300
To Vendor (*X*) account (to give fresh credit)			7,600
Step 3. (i) Pay creditors :			
Creditors account (cancels the creditors so far existing)	Dr.	6,000	
To Cash account			5,850
To Discount received account			150
(ii) Cancel discount received account, and creditors suspense account :			
X (to give fresh debit) s'account	Dr.	5,850	
Discount received account (to cancel the credit)	Dr.	150	
To Creditors suspense account (to cancel the debit)			6,000
Step 4. Pay vendors the amount due :			
X s'account	Dr.	1,750	
To Cash account			1,750
Amount received on his behalf	7,600		
Amount paid on his behalf	5,850		
Net amount to be paid	Rs. 1,750		

2—PROFIT PRIOR TO INCORPORATION

Nature of profit or loss.

A newly incorporated company may take over a running business as from a certain date which is prior to the date of incorporation. Thus a company incorporated on 1st April, 1978 may take over the business of a

partnership as from 1st January, 1978. If the business is to be purchased from the date of incorporation, stock taking must be completed and the balances of various assets and liabilities must be extracted, if this date does not coincide with the end of the financial year for which the partnership has prepared its last final accounts. To avoid all this trouble, the business is conveniently purchased from the date of last balance sheet.

[illegible] npany can earn profit [illegible] ierefore the profit made [illegible] incorporation cannot be taken as profit earned by the company. Thus in the example given above whatever profits are made for the period 1st January to 31st March, 1978 cannot be taken as revenue profits by the purchasing company. They must be deemed to be capital profits and transferred to capital reserve. It is, therefore, essential for the company to calculate the amount of such profits. If there is a loss during the period then it is in the nature of a capital loss and must be debited to goodwill account.

In the case of a public limited company, it has to also obtain a certificate to commence business. So the question arises as to whether one should take the date of incorporation or the date of certificate to commence business as the relevant date for calculating the capital profits. There is a divided opinion on this question. However, it has now become a settled practice to take the date of incorporation as the relevant date for this purpose. This is based on the ground that once the certificate is given, the company's power to carry on the business relates back to the date of incorporation. Obtaining the certificate to commence business is purely a legal formality and therefore even in the case of a public limited company, it is appropriate to take the date of incorporation as the relevant date for calculating the capital profits.

Calculation. In order to calculate profit or loss prior to incorporation date the following steps are recommended :

(*a*) Prepare *one* trading account for the whole period falling between the date of purchase and date of final accounts. The date of incorporation does not affect the calculation of gross profit.

(*b*) Calculate the following *two* ratios :

(*i*) *Time Ratio.* This is calculated by considering the period falling between the last date of balance sheet and the date of incorporation and the period between the date of incorporation and the date of present final accounts. If business is purchased on 1st Jan., 1969 and certificate of incorporation is granted on 1st April, 1969 and if final accounts are being prepared on 31st December, 1969 then the time ratio is 3 : 9 or 1 : 3.

(*ii*) *Sales Ratio.* Calculate sales for the pre-incorporation and post-incorporation periods and calculate the sales ratio.

(*c*) Now prepare a statement for calculating the net profits for pre- and post-incorporation periods separately. This is done as follows :

(*i*) Divide the gross profit of the full period into two parts on the basis of sales ratio. This gives gross profit separately for pre- and post-incorporation periods.

(ii) Divide all expenses of fixed nature, *viz.*, rent, salary, depreciation, interest in time ratio and other expenses in sales ratio.

(iii) There are certain expenses, *e.g.*, salary of partners, salary of directors, preliminary expenses which are not divided because they belong exclusively to a certain period. In the above case the total salary of partners is debited to the pre-incorporation period and preliminary expenses and directors' salary to the post-incorporation period.

Illustration 70. P & Co. Private Limited was incorporated on 1-7-1967 to take over the business carried on by P & Co. as a going concern with effect from 1-4-1967. The following is the profit and loss account for the year ended 31-3-1968 of P & Co. Private Ltd.

	Rs.		Rs.
To Opening stock	1,20,000	By Sales (up to 30-6-1967 Rs. 1,00,000)	3,00,000
To Purchase	1,75,000	By Closing stock	70,000
To Balance c/d	75,000		
	Rs. 3,70,000		Rs. 3,70,000
To Administrative expenses	18,000	By Balance b/d	75,000
To Director's fees	3,000		
To Selling expenses	36,000		
To Audit fee	1,000		
To Preliminary expenses	3,000		
To Net profit	14,000		
	Rs. 75,000		Rs. 75,000

You are required to prepare a statement showing the profit earned prior to and after incorporation and state how the profit earned during the respective periods may be dealt with in the accounts.

(Institute of Company Secretaries, 1969 Final)

Solution :

P. & Co. (P) Ltd.

STATEMENT OF PROFIT BEFORE AND AFTER INCORPORATION

	Basis	*Prior to Incorporation* Dr. Rs.	Cr. Rs.	*After Incorporation* Dr. Rs.	Cr. Rs.
Gross profit	Sales (1 : 2)		25,000		50,000
Adm. expenses	Time (3 : 9)	4,500		13,500	
Directors' fees	—			3,000	
Selling expenses	Sales	12,000		24,000	
Audit fee*	Time	250		750	
Preliminay expenses	—			3,000	
Profit		8,250		5,750	
		25,000	25,000	50,000	50,000

Profit prior to incorporation is Rs. 8,250 ; it is capital profit and is not available for distribution. Profit after incorporation is Rs. 5,750 and is at the disposal of directors for utilisation for any purpose, including distribution as dividend.

*This is apportioned over the two periods since audit must have covered both periods. Sometimes the whole audit fee is debited to post-incorporation period. It is always better to append the note relating to the treatment given to this item.

Calculation of sales ratio. It has been seen that gross profit and many expenses are divided in the sales ratio. Determination of this ratio is thus an essential requirement Leaving some simple cases, where turnover is evenly spread over the whole financial period, sales normally fluctuate from month to month according to the nature of the product. For example, in the case of woollen garments sales of the month of October, November, December and January must be very much different from that in other months. Not only this, it may be found on comparison that sale of the month of October is different from that of November, December and January taken se[illegible] [illegible] the sales ratio is determined with [illegible] sales with the total sales. [illegible]:

[illegible] 1st April, 1973, took over a [illegible] e company prepared its first [illegible] om the following information you are required to calculate the sales ratio of pre- and post-incorporation periods :

(a) Sales from January 1973—December, 1973 Rs. 3,60,000, (b) Sales for the month of January twice the average sales ; for the month of of February—equal to average sale ; sales for four months from May to August—¼th of the average sale of each month ; and sales for October and November three times the average sale.

Solution :

(1) *Calculation of average sale per month* $=\frac{3,60,000}{12}=$ Rs. 30,000

(2) *Calculation of sales for those months for which information is given* :

January	2 × Rs. 30,000	=	Rs. 60,000
February	1 × Rs. 30,000	=	Rs. 30,000
May	¼ × Rs 30,000	=	Rs. 7,500
June	¼ × Rs. 30,000	=	Rs. 7,500
July	¼ × Rs. 30,000	=	Rs. 7,500
August	¼ × Rs. 30,000	=	Rs. 7,500
October	3 × Rs. 30,000	=	Rs. 90,000
November	3 × Rs. 30,000	=	Rs. 90,000
	Total sales for the above months		Rs. 3,00,000

(3) *Calculation of sales for the remaining months* :

(a) Remaining months are : March, April, September and December.

(b) Remaining unaccounted sale is : Rs. 3,60,000 − Rs. 3,00,000 = Rs. 60,000

(4) *Calculation of average sales for the remaining period* :

$=\frac{\text{Remaining Sale}}{\text{Remaining months}}=\frac{60,000}{4}=$ Rs. 15,000 per month

(5) *Calculation of sale for the pre-incorporation period :*

	Rs.
January	60,000
February	30,000
March	15,000
	Rs. 1,05,000

(6) *Sales for post-incorporation period :*

Total Sales—Pre-incorporation period sales
=Rs. 3,60,000—Rs. 1,05,000=Rs. 2,55,000

(7) *Calculation of sales ratio :*

2,55,000 : 1,05,000=255 : 105 or [redacted] 17 : 7

Calculation of weighted ratio. It is often seen that total pay-bill of certain time expenses, *e.g.*, salary, wages, does not remain constant throughout the year. If they remain constant then they can be divided in the time ratio. But the difficulty arises when the number of employees change with the conversion of the firm into a limited company. The ratio for this purpose is arrived at after considering time and number of wage earners in pre- and post-incorporation periods. It has been assumed that rate of payment is the same in all the cases (*see* Problem 15 in Assignment Material).

Illustration 72. You are required to calculate the weighted time ratio for pre- and post-incorporation periods from the following particulars :

(*i*) Date of incorporation 1st April, 1973 ; (*ii*) Period of financial accounts Jan.-Dec. 1973 ; (*iii*) Total wages Rs. 4,800 ; (*iv*) Number of workers : Pre-incorporation period 5, Post-incorporation period 25.

Also divide the total wages into pre- and post-incorporation periods.

Solution :

Simple time ratio =3 months : 9 months=1 : 3

Weighted time ratio=(1×5) : (3×25) (calculated by multiplying
=5 : 75=1 : 15 the time ratio with the ratio of workers)

Wages for pre-incorporation period=Rs. 300 ; Wages for post-incorparation period=Rs. 4,500.

Illustration 73. Rowlock Ltd was incorporated on 1st October, 1968 to acquire Rowlock's mail order business, with effect from 1st June 1968.

The purchase consideration was agreed at Rs. 35,000 to be satisfied by the issue on 1st December, 1968 to Rowlock or his nominee of :

20,000 ordinary shares of Re. 1 each, fully paid and Rs. 15,000 7% Debentures.

The entires relating to the transfer were not made in the books which were carried on without a break until 31st May, 1969.

On 31st May, 1969 the trial balance extracted from the books showed the following :

	Rs.		Rs.
Sales	52,185	Director's salary	1,000
Purchases	38,829	Debenture interest (gross)	525
Wrapping	840	Fixed assets	25,000
Postage	[illegible]	Current assets (other than stock)	9,745
Warehouse rent and rates		[illegible]	4,162
Packing expenses		[illegible]	218
Office expenses		[illegible]	
Stock on 31st May, 1968		[illegible]	29,450
		[illegible]	500

You also ascertain the following: (1) Stock on 31st May 1969 amounted to Rs. 4,946. (2) The average monthly sales for June, July and August were one-half of those for the remaining months of the year. The [illegible] periods before and after incorporation, and balance sheet as on the date.

(C.A. Inter., England, 1969)

Solution :

Rowlock Ltd.

TRADING AND PROFIT AND LOSS ACCOUNT

For the year ended May 31, 1969

	Rs.	Rs.		Rs.
Stock, May 31, 1968		5,261	Sales	52,185
Purchases		38,829		
		44,090		
Less Stock, May 31, 1969		4,946		
		39,144		
Gross profit, c/d				
June 1, 1968, to September 30, 1968	3,105			
October 1, 1968, to May 31, 1969	9,936			
		13,041		
		Rs. 52,185		Rs. 52,185

	June 1, 1968 to Sept. 30, 1968 Rs.	*Oct. 1, 1968 to May 31, 1969* Rs.		*June 1, 1968 to Sept 30, 1968* Rs.	*Oct 1, 1968 to May 31, 1969* Rs.
Packing, postage and wrapping	755	2,416	Gross profit b/d	3,105	9,936
Warehouse rent and rates	307	614			
Office expenses	209	418			
Director's salary		1,000			
Debenture interest		525			
Formation expenses		218			
	1,271	5,191			

Pre-incorporation profit transferred to goodwill account	1,834				
Balance c/d		4,745			
	Rs. 3,105	9,936		Rs. 3,105	9,936

BALANCE SHEET
As at May 31, 1969

	Rs.		Rs.
Issued share capital : 20,000 ordinary shares of Re 1 each, fully paid	20,000	Fixed assets	25,000
Profit and loss account	4,745	Goodwill	3,716
		Current assets (other than stock)	9,745
		Loan account—Rowlock	500
	24,745	Stock	4,946
7 per cent debentures	15,000		
Current liabilities	4,162		
	Rs. 43,907		Rs. 43,907

TUTORIAL NOTES

(1) Calculation of ratio between pre- and post-incorporation sales :

1968	*Pre-incorporation*	*Post-incorporation*
June, July, August (one each)	3	
September to December (two each)	2	6
1969		
January to May (two each)		10
atio	5	16

The gross profit, wrapping, postage and packing expenses have, therefore, been apportioned in this ratio (5 : 16). The other expenses are either wholly post-incorporation, or have been apportioned on a time basis (*i.e.*, 1 : 2).

(2) Goodwill :

	Rs.
Excess of purchase consideration over Rowlock's capital account—(Rs. 35,000—Rs. 29,450)	5,550
Deduct pre-incorporation profit	1,834
	Rs. 3,716

Note : It is assumed that Rowlock is the director of the company and that the salary in the trial balance is in respect of the period commencing October 1, 1968, and that there is no agreement that he was to receive remuneration at the same rate for the period from June 1 to September 30, 1968. If there was such an agreement then his drawing in the first period would be treated as a payment on account of such remuneration and charged against the profits for the first four months, with the result that goodwill would appear in the balance sheet at Rs. 500 more, *i.e.*, Rs. 4,216.

Illustration 74. Tara Industries Ltd agreed to take over the business of Sri K. Basak from 31st March 1970 in consideration of Rs. 66,000 to be discharged by the issue of equity shares only. On that day the balance sheet of Sri K. Basak was :

Liabilities	Rs.	*Assets*	Rs.
Sundry creditors	30,000	Cash balances	2,000
Loans : S. Sarkar	6,000	Sundry debtors	22,000
Capital	60,000	Furniture	15,000
		Machinery	45,000
		Goodwill	10,000
		Profit & loss account	2,000
	Rs 96,000		Rs. 96,000

The Company was registered on 1st May, 1970 as a public limited company and obtained a commencement certificate to business on 1st July, 1970. The authorized capital was Rs. 5,00,000 divided into 50,000 equity shares of Rs. 10 each. The company issued for cash 15,000 equity shares to the public at a premium of Rs. 2 per share. The same set of books were continued by the Company and no entries were passed in the books for the takeover of business. Loan from S. Sarkar was repaid before 31st March, 1971.

Apart from this information, the following balances as on 31st March, 1971 were also given :

	Rs.		Rs.
Sundry creditors	34,500	Bank overdraft	21,000
Cash balance	8,000	Purchases	1,81,000
Salary and wages	68,000	Freight	6,000
Sales	3,00,000	Other expenses	10,000
New machinery	95,000	Interest paid	3,000

You are required to prepare the final accounts of Tara Industries Ltd for 1970-71 after taking into account stock of Rs. 15,000 on 31st March 1971 and after providing for depreciation on assets at 10 per cent.

[B. Com , (Hons.), Calcutta, 1971]

Solution : In a problem of this type it will be useful to prepare a trial balance as at the end of the year after carrying out the necessary adjustments arising out of the acquisition of business and other information given.

TRIAL BALANCE
as on 31st March, 1971

Debits	Rs.	*Credits*	Rs
Cash balance	8,000	Sundry creditors	34,500
Purchases	1,81,000	Bank overdraft	21,000
Salary and wages	68,000	Sales	3,00,000
Freight	6,000	Equity share[3] capital account	2,16,000
Other expenses	10,000	Share premium account	30,000
Machinery (45,000+95,000)	1,40,000		
Furniture	15,000		
Interest paid	3,000		
Goodwill[1]	18,000		
Sundry debtors[2]	1,52,500		
	Rs. 6,01,500		Rs. [illegible]

TUTORIAL NOTES

(1) Goodwill is arrived at as follows :

Gross assets taken over by the company (total of the assets side minus P & L A/c balance) [illegible]

Less Liabilities :		
Sundry creditors	30,000	
Loan from Sarkar	6,000	36,000
Net assets taken over		58,000
Purchase consideration		66,000
Resultant Goodwill		8,000
Add Goodwill already figuring in the books		10,000
Total goodwill		Rs. 18,000

(2) The figure of sundry debtors is calculated as follows :

(A) SUNDRY CREDITORS ACCOUNT

	Rs.		Rs.
To Cash account (balancing figure)	1,76,500	By Balance b/d	30,000
To Balance c/d	34,500	By Purchases	1,81,000
	Rs. 2,11,000		Rs. 2,11,000

(B) COMBINED CASH AND BANK ACCOUNT

To Balance b/d	Rs. 2,000	By Payment to creditors	Rs. 1,76,500
To Equity share application account (on 15,000 shares at Rs. 12 each)	1,80,000	By Sarkar's loan account	6,000
To Cash received from sundry debtors (balancing figure)	1,69,500	By Salary and wages	68,000
To Balance at bank (O.D)	21,000	By Freight	6,000
		By Other expenses	10,000
		By Machinery	95,000
		By Interest	3,000
		By Balance of cash	8,000
	Rs. 3,72,500		Rs. 3,72,500

(C) SUNDRY DEBTORS ACCOUNT

To Balance b/d	Rs. 22,000	By Cash account	Rs. 1,69,500
To Sales	3,00,000	By Balacne c/d (balancing figure)	1,52,500
	Rs. 3,22,000		Rs. 3,22,000

(3) Equity share capital account :

Share capital issued to vendors	66,000
Share capital issued to public	1,50,000
Total	2,16,000

With the help of the trial balance prepared as above, the final accounts are prepared as given below :

TRADING ACCOUNT
for the year ended 31st March, 1971

	Rs.		Rs.
To Opening stock	...	By Sale	3,00,000
To Purchases	1,81,000	By Closing stock	15,000
To Gross profit transferred to P & L A/c	1,34,000		
	Rs. 3,15,000		Rs. 3,15,000

PROFIT AND LOSS ACCOUNT
for the year ended 31st March, 1971

	Pre-incorporation period i.e., 1-4-70 to 30-4-70	Post-incorporation period i.e., 1-5-70 to 31-3-71		Pre-incorporation period i.e., 1-4-70 to 30-4-70	Post-incorporation period i.e., 1-5-70 to 31-3-71
	Rs.	Rs.		Rs.	Rs.
To Salary and wages	5,667	62,333	By Gross profit transferred from trading account	11,167	1,22,833
To Freight	500	5,500			
To Other expenses	833	9,167			
To Interest paid	250	2,750			
To Depreciation					
Furniture @ 10%	125	1,375			
Machinery @ 10%	375	12,833			
To Capital reserve transfer of pre-incorporation profit	3,417				
To Balance c/d post, incorporation profit		28,875			
Rs.	11,167	1,22,833	Rs.	11,167	1,22,833

Notes : (1) In apportioning the expenses, the figures have been rounded off to the nearest rupee.

(2) In the absence of any information about sales for the two periods, gross profit as well as expenses have been apportioned on the basis of time.

(3) Depreciation on machinery has been calculated as under :

On Rs. 45,000 @ 10 % for one month	Rs. 375
On Rs 1,40,000 @ 10% for 11 months	12,833

It is presumed that the new machinery was bought on 1-5-1970.

Tara Industries Ltd.

BALANCE SHEET *as on 31st March, 1971*

Liabilities	Rs.	*Assets*	Rs.	Rs.	Rs.
...rised capital :		Fixed assets :			
... equity shares of ... 10 each	5,00,000	Goodwill		18,000	
...ed and subscribed capital :		Machinery	1,40,000		
...00 equity shares of Rs 10 each ...sued for cash consideration	1,50,000	Less depn.	13,208	1,26,792	
...000 equity shares of Rs. 10 each ...ssued to Mr. Basak for the acquisition of business	66,000	Furniture	15,000		
	2,16,000	Less depn.	1,500	13,500	1,58,292
...eserves and surplus :		Current assets :			
Capital reserve	3,417	Stock		15,000	
Share premium account	30,000	Sundry debtors		1,52,500	
Profit and loss account	28,875	Cash in hand		8,000	1,75,500
Secured loans	Nil				
Unsecured loans : Bank overdraft	21,000				
Current liabilities and provisions : Sundry creditors	34,500				
	Rs. 3,33,792				Rs. 3,33,792

Illustration 75 : New Ventures Ltd. was incorporated on 1st January, ...972 with an authorised capital consisting of 5,000 equity shares of Rs. 10 ...ach to take over the running business of Rundown Brothers as from 1st ...October, 1971. The following is the summarised profit and loss account ...for the year ended 30th September, 1972 :

	Rs.		Rs.	Rs.
Cost of sales for the year	16,000	Sales		
Administrative expenses	1,768	1st October, 1971 to 31 t December, 1971	6,000	
Selling commission	875	1st January, 1972 to 30th September, 1972	19,000	25,000
Goodwill written off	200			
Interest paid to vendors (Loan repaid on 1st February,	373			
Distribution expenses (60 per cent variable)	1,250			
Preliminary expenses written off	330			
Debenture interest	320			
Depreciation	444			
Directors' fees	100			
Net profit	3,340			
	Rs. 25,000			Rs. 25...

The company deals in one type of product. The unit cost of s... was reduced by 10 per cent in the post-incorporation period as comp... to the pre-incorporation period in the year. You are required to appo... the net profit amount between pre-incorporation and post-incorpo... periods showing the basis of apportionment.

(C.W.A. Part III, England 1970, Modified ; C A. Inter., ...
(A.C.S. Inter, December, 1977 ; B. Com., Madras A...

Solution :

STATEMENT OF PRE. & POST-INCORPORATION PROFITS
OF NEW VENTURE LTD.
(Year ended September, 30, 1972)

	Basis of allocation	Total amount	Pre-Incorporation	Post-Incorporation
			(1st October 1971 to 31st Dec. 1971)	(1st Jan. 1972 to 30th Sept. 1972)
Sales	Actual	Rs. 25,000	Rs. 6,000	Rs. 19,000
Less Costs and expenses				
Cost of sales	(See note)	16,000	4,156	11,844
Administrative expenses	Time (1 : 3)	1,768	442	1,326
Selling commission	Sales 6 : 19)	875	210	665
Goodwill	—	200	—	200
Interest to vendors	Time (3 : 1)	373	280	93
Distributive expenses :	40% fixed (time)	500	125	375
	60% variable (sales)	750	180	570
Preliminary expenses	—	330	—	330
Debenture interest	—	320	—	320
Depreciation	Time (1 : 3)	444	111	333
Directors' fees	—	100	—	100
		21,660	5,504	16,156
Profit		3,340	496	2,844

Tutorial Note

Let cost of sales in the pre-incorporation period be Rs. 100.

Then cost of sales in the post-incorporation period is Rs. 90.

Sales in the pre-incorporation period=Rs. 6,000.

Sales in the post-incorporation period=Rs. 19,000

∴ The ratio of cost of sales of the two periods
$=(100\times6000):(90\times19{,}000)=60:171.$

Divide the total cost of sales in this ratio.

3—UNDERWRITING

In the case of public limited companies, unless the shares equal to minimum subscription are allotted, they are not granted the certificate to commence business. So in order to ensure the minimum subscription, public companies enter into underwriting arrangements.

Guaranteeing to subscribe to an agreed number of shares for consideration is called underwriting. Gestenberg quotes an English case in which the learned judge defines the underwriting as "an agreement entered

into before the shares are brought before the public that in the event of the public not taking up the whole of them or the number mentioned in the agreement, the underwriter will, for agreed commission, take an allotment of such part of the shares as the public has not applied for."[1]

The persons or institution who underwrite the issue are known as underwriter. In India the business of underwriting is carried on by the Industrial Development Bank of India, Industrial Finance Corporation of India, the Industrial Credit and Investment Corporation of India, Life Insurance corporation of India, commercial banks, investment trusts and other financial houses. In the case of large issues, arrangements are made with several underwriters, each underwriting a specified amount. The directors must be careful in choosing the underwriters, as they will have to state in the prospectus that in their opinion the resources of the underwriters are sufficient to discharge their obligations. It may be noted that the underwriting arrangements are not mandatory and companies which are confi- dent of public response do not get their issues underwritten and thus sav a lot of money by not paying the underwriting commission. For examp Ashok Leyland Limited came out in February 1979 with an issue whi was not underwritten, although the amount involved was nearly two a half crores of rupees.

Underwriting commission. Provisions relating to underwriting co mission have been laid down in Section 76 of the Companies Act, 1 It authorises the payment of commission on the fulfilment of the follow conditions :

(*i*) the payment of commission is possible only when it is a rised by the articles :

(*ii*) the commission paid or agreed to be paid does not excee

(*a*) in the case of shares, five per cent of the price at wh shares are issued or the amount or rate authorised articles, whichever is less, and

(*b*) in the case of debentures, *two and a half* per cen price at which the debentures are issued or the a rate authorised by the articles, whichever is less,

(*iii*) the commission paid or agreed to be paid is disclo prospectus or statement in lieu of prospectus, as may be.

Underwriting agreement. Underwriting agreement may t the two forms :

Pure underwriting. Under this type of contract underwriter to subscribe for shares to a certain limit only when the offer public is not fully subscribed for by them. Thus if underwrite 10,000 shares issued by a company, they will have to purchas if the public applies for only 8,000 and 3,000 shares it the for 7,000 and nothing if the public applies for 10,000 or mor underwriting contract may be signed by one underwriter i position of the underwriter is as good as to take the risk the whole issue in the worst circumstances of no response

1. Financial Organisation and Management P. 387.

But generally, the underwriting contract is signed between the company and two or more underwriters each agreeing to insure against the risk only to a limited extent.

Firm underwriting. Under 'firm' underwriting contract, the underwriters, instead of standing behind the offer, agree to make an outright *purchase* of shares. Thus under 'firm' underwriting, the underwriters stipulate that they be allotted a given number of shares whether or not the issue is oversubscribed. The underwriters under such agreement get priority over the general public in relation to allotment of shares in the event of oversubscription. If, for example, underwriters have 'firm' underwritten 10,000 shares of the total issue of 40,000 shares, only 30,000 shares shall be available to the public even if there are applications for 50,000 shares.

Underwriter and Broker distinguished. An underwriter, as stated above, is a person who agrees to take a specified number of shares or debentures, or a specified amount of debenture stock in the event of the public not subscribing for them in consideration for a commission which is called 'underwriting commission'. A broker, on the other hand, is a person who gives his services in bringing a settlement between a vendor and a purchaser for a reward which is generally called 'brokerage'. Brokerage is to be distinguished from underwriting commission. While brokerage is paid for the service of placing the shares, underwriting commission is paid for guaranteeing the subscription. Sec. 76 (3) of the Companies Act permits the payment of reasonable brokerage in addition to the payment of underwriting commission.

[illegible] that [illegible] two [illegible] by several underwriters, each of them makes an effort for selling shares or debentures through him so that the subscription so collected may be counted to reduce the risk undertaken by him (particular underwriter). Lest the subscription made through his effort be counted to the advantage of some other underwriter, it is a common practice to put a *seal* on the [illegible] get the application form through some underwriters, but get them directly [illegible] *unmark-* [illegible] all the [illegible] issue [illegible] the [illegible] all the [illegible] divi- [illegible].

Accounting treatment under pure underwriting. Accounting treatment in the books of insured company may be studied as follows :

1. *For commission or brokerage*

Debit Commission or brokerage on issue of shares or debentures account

Credit Underwriter's (or broker's account)

2. *For payment of commission or brokerage*

   Debit Underwriter's (or broker's) account

   Credit Bank account (or shares or debenture account)

   Shares or debentures are issued if commission or brokerage is discharged by issuing shares or debentures.

3. *For receiving the liability in the case of under-subscription*

   If shares/debentures are under-subscribed, the underwriter is forced to take up the shares/debentures not subscribed for by the public. Following journal entry is necessary :

   Debit Underwriter's account

   Credit Share capital/debenture account

4. *For receiving the payment on shares/debentures taken under contract*

   Debit Bank account

   Credit Underwriter's account

   Instead of paying the commission to underwriters and receiving money from them for shares taken by them under contract, it is quite common to settle the account for the difference between the two.

Determination of the liability of underwriters

The determination of the liability of the underwriter depends on the nature of underwriting agreement. Therefore, the liability under different types of agreement is discussed below.

I. When the entire issue is underwritten

Again, the entire issue may be underwritten by one underwriter or more than one underwriters. Where the issue is underwritten by one person, he will get credit for all the applications whether marked or not. So his liability will be equal to the number of shares underwritten minus the number of shares applied for. So if the issue is fully subscribed or over-subscribed, there will be no liability for the underwriter to take up any share. The underwriter will, however, be entitled to get his commission only on the issue price of shares underwritten by him.

Where the issue is underwritten by two or more underwriters in an agreed ratio the procedure is as follows :

Step. 1. Calculate the gross liability of each underwriter in the agreed ratio. In many problems it will be given as such and does not involve any calculation.

Step 2. Deduct the marked applications from the gross liability.

Step 3. Give credit to unmarked applications in the ratio of gross liability. This is done by way of deduction from the balance after step 2.

Step 4. In case some figure is in minus then transfer that figure to other underwriters' accounts in the ratio of gross liability *inter se*. This gives the liability of underwriters on account of shortfall in the public subscription.

Sometimes credit to unmarked applications is given in the ratio of

gross liability as reduced by the marked applications. The individual liability calculated in this way will differ from the liability calculated as for the earlier procedure. The difference that these two methods cause in the calculation of net liability is illustrated below.

Illustration 76. Export Ltd incorporated on 1st January, 1977 issued a prospectus inviting applications for 5,00,000 equity shares of Rs. 10 each at a premium of 10 per cent.

The whole issue was fully underwritten by Kapoor, Bhora, Dalal and Mehta as follows :

Kapoor	2,00,000 shares
Bhora	1,50,000 shares
Dalal	1,00,000 shares
Mehta	50,000 shares

Applications were received for 4,50,000 shares of which marked applications were as follows :

Kapoor	2,20,000 shares
Bhora	90,000 shares
Dalal	1,10,000 shares
Mehta	10,000 shares

It was agreed that underwriters be paid commission at 5% on the issue price. You are required

(a) to find out the liabilities of individual underwriters, and

(b) to give necessary journal entries including for cash transactions.

[Adapted from C.A. (Inter) May, 1977]

Solution : The net liability of the individual underwriters is ascertained by giving credit to unmarked applications (1) in the ratio of gross liability (Statement A) and (2) in the ratio of gross liability as reduced by marked applications (Statement B).

Statement A

NET LIABILITY OF UNDERWRITERS

	Kapoor shares	*Bhora shares*	*Dalal shares*	*Mehta shares*	*Total*
(a) Gross liability as per the agreement	2,00,000	1,50,000	1,00,000	50,000	5,00,000
(b) Less marked applications	2,20,000	90,000	1,10,000	10,000	4,30,000
(c) Resultant liability	(—)20,000	60,000	(—)10,000	40,000	70,000
(d) Credit for unmarked applications in the ratio of gross liability (4 : 3 : 2 : 1)	8,000	6,000	4,000	2,000	20,000
(e) Resultant liability	(—)28,000	54,000	(—)14,000	38,000	50,000
(f) Surplus of Kapoor and Dalal distributed to Bhora and Mehta in the ratio of 3 : 1	28,000	(—)31,500	14,000	(—)10,500	—
(g) Net liability	Nil	22,500	Nil	27,500	

...ment B NET LIABILITY OF UNDERWRITERS

	Kapoor shares	*Bhora shares*	*Dalal shares*	*Mehta shares*	*Total*
(a) Gross liability	2,00,000	1,50,000	1,00,000	50,000	5,00,000
(b) Less marked applications	2,20,000	90,000	1,10,000	10,000	4,30,000
(c) Resultant liability	(—)20,000	60,000	(—)10,000	40,000	70,000
(d) Surplus distributed in the ratio of gross liability	20,000	(—)22,500	10,000	(—)7,500	—
(e) Gross liability as reduced by marked applications	Nil	37,500	Nil	32,500	70,000
(f) Credit for unmarked applications in the ratio of 37,500 : 32,500		12,000		8,000	20,000
(g) Net liability	Nil	25,500	Nil	24,500	50,000

From the above statements it is clear that the liability of the underwriter varies according to the method adopted.

So it is essential to specify the method in the underwriting agreement. As for the student he can adopt any one of the above two methods but indicating by way of a footnote the alternative method of calculating the net liability.

JOURNAL

Bank account	Dr.	49,50,000	
To Equity share application account			49,50...
Equity share application account	Dr.	49,50,000	
To Equity share capital account			45,0...
To Share premium account			4,5...
Bhora's account	Dr.	2,47,500	
Mehta's account	Dr.	3,02,500	
To Equity share capital account			5...
To Share premium account			
Commission on shares account	Dr.	2,75,000	
To Kapoor's account			
To Bhora's account			
To Dalal's account			
To Mehta's account			
Bank account	Dr.	4,40,000	
To Bhora's account			
To Mehta's account			
Kapoor's account	Dr.	1,10,000	
Dalal's account	Dr.	55,000	
To Bank account			

The entries in the journal have been made on the liability as per Statement A.

II. When the issue is partially underwritten

By partial underwriting is meant that only a portion of the issue is underwritten. In such a case for the balance not underwritten, the company itself becomes the underwriter. Again as in the case of complete underwriting, partial underwriting may be done by one underwriter, or more than one underwriter. The calculation of liability in each case is discussed below :

(A) When the partial underwriting is done by one person only.

In this case the net liability of the underwriter will be equal to his gross liability minus the marked applications received to his credit. All the unmarked application are treated as marked in favour of the company and, therefore, the underwriter does not get any credit for them.

Illustration 77. Purohit Ltd issued 1,00,000 equity shares of which only 75% was underwritten by Dixit.

Applications for 60,000 shares were received out of which applications for 48,000 shares were marked in favour of Dixit.

Determine the net liability of Dixit.

Solution :

	No. of shares
Gross liability of Dixit—75% of 1,00,000	75,000
Less Marked applications	48,000
Net liability of Dixit	27,000

Note : The underwriter will have no liability if the company [illegible] shares or more although the marked [illegible] res. Similarly, if the applications for [illegible] he underwriter, his net liability will be restricted to total issue minus the number of shares subscribed. In the above example if the company received applications for 85,000 shares, the net liability of Dixit will be restricted to 15,000 shares, *i.e.*, 1,00,000 shares-85,000 shares.

[illegible]

(B) When the partial underwriting is done by more than one person.

As under A, the company is deemed to be the underwriter for the balance not underwritten and gets the credit for unmarked applications. An illustration will make clear that the method is similar to one discussed under II (A).

Illustration 78. Prasanti Ltd issued 20,000, 10% debentures of Rs. 100 each for public subscription The issue was underwritten as follows :

Satyam 25%, Sivam 30% and Sundaram 25%. The company received a total number of 14,000 applications of which marked applications were as follows : Satyam 4.000 : Sivam 3,000 and Sundaram 4,000.

Determine the liability of each of the uuderwriters.

Solution :

	Satyam	Sivam	Sundaram
	25%	30%	25%
Gross liability	5,000	6,000	5,000
Less Marked applications	4,000	3,000	4,000
Net liability	1,000	3,000	1,000

III. Firm underwriting

When the underwriters agree to firm underwriting, it becomes an additional liability and therefore must be added to the net liability arising under the agreement. In the calculation of net liability the shares underwritten firm are ignored. For the sake of clear understanding the steps involved in the procedure are listed below :

Step 1. Calculate the gross liability of each underwriter in the agreed ratio.

Step 2. Deduct the marked applications from the gross liability.

Step 3. Give credit to unmarked applications in the ratio of gross liability. For this purpose applications made under firm underwriting are treated as unmarked applications.

Step 4. If as a result of the above steps, the figure is in minus (surplus) for any underwriter, then transfer that figure to the other underwriters in the ratio of gross liability *inter se.* This gives the net liability.

Step 5. Add liability in respect of firm underwriting to the net liability calculated under step 4. This gives the total liability of each underwriter.

Illustration 79. Janata Ltd issued 40,000 shares which were underwritten as follows :

Krishnan 24,000 shares, Anand 10,000 shares and Prakash 6,000 shares. The underwriters made applications for firm underwriting as under :

Krishnan 3,200 shares, Anand 1,200 shares and Prakash 4,000 shares. The total subscriptions excluding firm underwriting but including marked applications were for 20,000 shares.

The marked applications were as under :

Krishnan 4,000 shares, Anand 8,000 shares, Prakash 2,000 shares. You are required to show the allocation of liability.

Solution :

STATEMENT SHOWING THE UNDERWRITERS' TOTAL LIABILITY

	Krishnan	*Anand*	*Prakash*	*Total*
(a) Gross liability as per the agreement	24,000	10,000	6,000	40,000
(b) *Less* Marked applications	4,000	8,000	2,000	14,000
(c) Balance remaining	20,000	2,000	4,000	26,000
(d) *Less* Unmarked applications in the ratio of gross liability, *i.e.*, 12 : 5 : 3	8,640	3,600	2,160	14,400[1]
(e) Balance remaining	11,360	(—)1,600	1,840	11,600
(f) Credit for Anand's surplus to Krishnan and Prakash in the ratio of 12 : 3	(—)1,280	1,600	(—)320	—
(g) Net liability as per the agreement	10,080	Nil	1,520	11,600
(h) *Add* Liability in respect of firm underwriting	3,200	1,200	4,000	8,400
(i) Total liability	13,280	1,200	5,520	20,000

Tutorial Notes : (1) Unmarked applications are calculated as follows :

	No. of shares
Total subscriptions (excluding firm underwriting)	20,000
Less Marked applications	14,000
Balance—unmarked applications by public	6,000
Add Applications under firm underwriting	8,400
Total	14,400

(2) Total allocation is as under—	*No. of shares*
Unmarked applications made by the public	6,000
Marked applications made by the public	14,000
Total liability as per the statement	20,000
	40,000

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'true' or 'false'.

(1) On acquisition of business the difference between purchase price and the net assets must be adjusted to goodwill or capital reserve as the case may be.

(2) On acquisition of business, a company may continue the same books maintained by vendor business.

(3) If the partners who sold the business wish to receive the dividend from the company in the old profit sharing ratio they must share the equity shares received from the company in their capital ratio.

(4) When the same set of books are continued, assets and liabilities not taken over by the company, must be distributed among the partners in the ratio of final claim.

(5) Profits prior to incorporation are not available for dividend and must be transferred to capital reserve.

(6) For calculating the capital profit or loss, date of commencement of business is the relevant date in the case of a public limited company.

(7) Preliminary expenses must be apportioned on time basis to the pre-incorporation and post-incorporation periods.

(8) Underwriting commission is payable only in respect of shares offered to the public.

(9) A public limited company is required to get the issue of shares underwritten compulsorily.

(10) Under firm underwriting, the underwriters agree to buy all the shares issued on an outright purchase basis.

II. Fill in the blanks :

(1) The maximum rate of commission payable for underwriting is ....per cent in the case of shares and........per cent in the case of debentures.

(2) The profit made on acquisition of business is credited to........ and likewise any loss on acquisition is debited to........ .

(3) The two important ratios in the calculation of profit prior to incorporation are ....and........ .

(4) When discount is allowed on vendors debtors, the same should be debited to..... ...account.

(5) Under Section 76 (3) of the Companies Act, a company in addition to underwriting commission can pay any........to brokers for placing shares.

(6) As per Section 76 (4A) of the Companies Act underwriting commission can be paid only in respect of shares offered........ .

(7) An unmarked application is one which does not bear the stamp (or seal) of the ....

(8) For ascertaining pre-incorporation profits, administrative expenses are apportioned in the........ .

III. Indicate the correct or best answer :

(1) Pre-incorporation profit is to be credited to

(a) Profit and loss account above the line

(b) Profit and loss account below the line

(c) Capital reserve.

(2) Underwriting commission is payable on
   (a) the issue price of shares
   (b) the nominal price of shares
   (c) the application money received on shares.

(3) For calculating the pre-incorporation profits of a public limited *company the relevant date to be considered is*
   (a) date of take-over
   (b) date of certificate of commencement of business
   (c) date of certificate of incorporation.

(4) The excess of purchase price over the net assets is
   (a) Goodwill
   (b) Capital Reserve
   (c) Preliminary Expenses.

(5) Directors' remuneration must be charged
   (a) exclusively to pre-incorporation period
   (b) exclusively to post-incorporation period
   (c) to both the periods in the time ratio.

(6) Pre-incorporation profits represent
   (a) Capital Profit
   (b) Revenue Profit
   (c) None of these.

(7) On sale of business if the partners wish to receive future dividends from the company in the profit sharing ratio, the equity shares received from the company must be distributed
   (a) in the ratio of final claim
   (b) in the profit sharing ratio
   (c) in the ratio of gain.

ACQUISITION OF BUSINESS

Exercises

1. New Company Ltd was formed on 1st January, 1976 with an authorised capital of Rs. 7,00,000 divided into 50,000 equity shares of *Rs. 10 each and 2,000 preference shares of Rs. 100 each, to acquire the* business of Old Co. as a going concern. The balance sheet of the Old Co., as at 31st December, 1975 is given below :

Liabilities	Rs.	*Assets*	Rs.
Sundry creditors	7,500	Cash at bank	3,800
A's loan account	15,500	Sundry debtors	9,700
Capital account	1,57,000	Stock in trade	36,000
		Furniture	3,500
		Plant and machinery	70,000
		Land and buildings	57,000
	Rs. 1,80,000		Rs. 1,80,000

The purchase consideration was to be discharged by the New Company Ltd, by the issue of 15,000 equity shares of Rs. 10 each, 500 preference shares of Rs 100 each and Rs 20,000 in cash. New Company Ltd also agreed to discharge the sundry creditors, but declined to accept A's loan. All the assets of the Old Co. were taken over at their balance

sheet values except stock which was valued at Rs. 40,000. A provision of 5 per cent was also created against sundry debtors.

The provide necessary working capital and to pay the purchase consideration, the remaining equity shares were issued at a premium of 10% and all cash was duly received. The preliminary expenses amounting to Rs. 15,000 were paid by the company immediately after the issue.

Show the opening entries in the books of the New Company Ltd and also the opening balance sheet. [I.C.W.A. (Final) June, 1976]

(Balance sheet total Rs. 5,92,500)

2. On 31st December, 1978, the following is the balance sheet of a a firm :

Liabilities	Rs.	Rs.	*Assets*	Rs.	Rs.
Capital accounts			Fixed assets		
A	55,000		Factory building	33,000	
B	55,000		Plant and machinery	42,000	
		1,10,000	Furniture etc.	5,000	
Creditors		40,000			80,000
			Current assets		
			Stocks, at cost	15,000	
			Sundry debtors	35,000	
			Cash in hand and at banks	20,000	70,000
	Rs.	1,50,000		Rs.	1,50,000

On 1st January, 1979 the firm is converted into a limited company n the following terms :

(*i*) Debtors and creditors of the firm were not to be taken over as well as the cash balances.

(*ii*) Assets were revalued as to furniture etc., at Rs. 3000, plant and machinery at Rs. 40,000 and the building at Rs. 35,000.

(*iii*) Preliminary expenses amounting to Rs. 2,000 were disbursed by the firm to be recovered from the company.

(*iv*) As purchase consideration, the partners were to be allotted at par 13,000 equity shares of Rs. 10 each. They were also entitled to receive Rs. 20,000 in cash.

Submit the balance sheet as at 1st January, 1979 of the limited company, assuming the authorised capital to be Rs. 2,00,000 made up wholly of equity shares of Rs. 10 each. [I.C.W A. (Final), December, 1974]

(Balance sheet total Rs. 1,52,000)

3. A company was incorporated for taking over the business of Mr. Gandabhoy on and from 1st January 1970. The following is the balance sheet of Mr. Gandabhoy as on 31st December, 1969.

Liabilities	Rs.	*Assets*	Rs.
Mr. Gandabhoy's capital account	50,400	Land and buildings	80,000
Trade creditors	35,600	Plant and machinery	14,000
Loan creditors	60,000	Furniture	10,000
		Sundry debtors	42,000
Rs.	1,46,000	Rs.	1,46,000

The company takes over the business with the fixed assets and loan creditors on the following terms: (*a*) The fixed assets should be depreciated by 10%. (*b*) The value of goodwill is estimated at Rs 40 000 The company realised Rs. [illegible]
vendor (Mr. Gandab[illegible]
creditors by paying R[illegible]
tive preference share[illegible]
realisation of the deb[illegible]

each. Pass the necessary journal entries for the above in the books of the company. (Indian Institute of Bankers, Part II, Nov., 1970)

4. Jaipur Ltd was formed on 1st January 1976, with an authorised capital of Rs. 10 lakhs for the purpose of acquiring the business of Calcutta Enterprises. An agreement of sale was entered into between the partners of Calcutta Enterprises and Shri Gopalan, the proposed managing director of the company. The agreement of sale dated 15th December, 1975, provided *inter alia* as under:

(*a*) that the business shall be taken over on the basis of the balance sheet as at 30th June, 1975 for a purchase consideration of Rs. 9 lakhs payable in cash;

(*b*) that the profits after 30th June, 1975 shall belong to the purchasers, subject to interest in favour of the vendors at 5 per cent per annum from the said date to the date of completion of purchase; and

(*c*) that after 30th June, 1975 the vendors shall carry on the business for and on behalf of the company.

The balance sheet of Calcutta Enterprises as at 30th June, 1975 was as follows:

Liabilities	Rs.	*Assets*	Rs.
Sundry creditors	1,35,000	Land and buildings	2,20,000
Partner's capital accounts	5,15,000	Plant and machinery	1,80,000
		Loose tools and stores	35,000
		Stock	1,25,000
		Sundry debtors	80,000
		Balance in current account with Calcutta Discount Bank Ltd	10,000
	Rs. 6,50,000		Rs. 6,50,000

On 31st December, 1975, the balance sheet was as follows:

Liabilities		Rs.	*Assets*	Rs.
Sundry creditors		1,20,000	Land and buildings	[illegible]
Partners' capital accounts		5,15,000	Plant and machinery	[illegible]
Partners' current a/cs			Loose tools and stores	[illegible]
Credit for interest	22,500		Stock	[illegible]
Less Drawings	20,000	2,500	Sundry debtors	[illegible]
Profit and loss a/c		77,500	Balance in current account with Calcutta Discount Bank Ltd	[illegible]
		Rs. 7,15,000		[illegible]

During January and February, 1976, 10,000 equity shares of Rs. 100 each were issued at a premium of Rs. 25 per share and were fully subscribed and paid for. The company became entitled to commence business on 16th February, 1976 and adopted the agreement of sale on 28th February, 1976. On the latter date it paid the purchase price and Rs. 5,000 towards interest.

The directors decided to open the books on the basis of the balance sheet as at 31st December, 1975, after taking into consideration the following :

(*a*) Land and buildings to be increased by Rs. 20,000, Plant and machinery to be increased by Rs. 20,000 and stock to be reduced by Rs. 10,000.

(*b*) The profit for the period from 1st January to 28th February, 1976 (on the basis of the value of the opening stock at Rs. 1,20,000) amounted to Rs. 12,000 subject to interest due to the vendors.

(*c*) The preliminary expenses amounted to Rs. 8,000.

Pass the opening journal entries in the books of Jaipur Ltd and the entries relating to the issue of capital. Also prepare a balance sheet as at 28th February, 1976. (C.A. Final, May, 1967)

(*Balance sheet total Rs. 12,64,500*)

5. A company was incorporated for taking over the business of Mr. Engineer on and from 1st January, 1968. The following is the balance sheet or Mr. Engineer as on 31st December, 1967 :

	Rs.		Rs.
Trade creditors	17,800	Land and buildings	40,000
Loan creditors	30,000	Plant and machinery	7,000
Capital account	25,200	Furniture	5,000
		Sundry debtors	21,000
	Rs. 73,000		Rs. 73,000

The company takes over the business with the fixed assets and loan creditors on the following basis : (*a*) The fixed assets should be depreciated at 10%. (*b*) The value of the goodwill is estimated at Rs. 20,000.

The company realised Rs. 20,000 from the sundry debtors as the agent of the vendors in full settlement and discharged all the trade creditors by paying Rs. 17,000. The loan creditors accepted 8% preference shares of Rs. 100 each in discharge of the loans. After realisation of the debts and discharge of the liabilities, the total amount due to the vendor was settled by payment of Rs. 4,800 in cash and the balance in the shape of fully paid equity shares of Rs. 10 each. Pass the journal entries for the above in the books of the company. (C.A. Inter., 1968)

(*Purchase consideration Rs. 36,800 ; Goodwill Rs. 20,000 ; Shares issued to Engineer Rs. 35,000*)

6. *P*, *Q* and *R* were carrying on business in partnership sharing profits and losses in the ratio of 5, 4 and 3 respectively. The trial balance of the firm on 31st March, 1971 was under :

	Rs.		Rs.
Plant and machinery at cost	85,000	Sundry creditors	84,700
Stock	64,200	Capital account *P*	63,000
Sundry debtors	66,500	,, ,, *Q*	42,000
Drawing account *P*	20 000	,, ,, *R*	21,000
,, ,, *Q*	20,000	Depreciation on plant and	
,, ,, *R*	15,000	machinery	25,000
Cash at bank	88,300	Trading profit for the year	1,23,300
	Rs. 3,59,000		Rs. 3,59,000

I- [illegible]
credit [illegible]
provid [illegible]
they f [illegible]
2,00,0 [illegible]
over the business of partnership. You are informed as under :

(1) Plant and machinery is to be transferred at its w. d. v. for I.T. which is Rs. 66,000.

(2) Shares in the company are to be issued to the partners, at par, in such number and such class as will give the partners, by reason of their [illegible] on capital and the [illegible] rship. Valuation of [illegible]

(3) Before transferring the business the partners wish to draw from the partnership their profits to such an extent that the bank balance is reduced to Rs. 50,000. For this purpose sufficient profits of the year are to be retained in profit-sharing ratio.

(4) All assets and liabilities except plant and machinery and the bank balance are to be transferred at their value in the books of the partnership as on 31-3-1971.

You are required to prepare : (*a*) P. and L. account for the year ending 31-3-71 ; (*b*) Capital accounts showing all the adjustments required to dissolve the partnership ; (*c*) Your statement showing the workings of the number of shares of each class to be issued by the company to each of [illegible] shares ; and (*d*) The [illegible] business of [illegible] Nov. 1971)

(*P will receive Rs. 6,300 in preference shares and Rs. 15,000 in equity shares ; Q will receive Rs 42,000 in preference share and Rs 12,000 in equity shares ; R will receive Rs. 21,000 in preference shares and Rs. 9,000 equity shares ; Balance sheet total Rs. 2,46,700*)

*7. Using the information given below concerning the partnership of I, W and C and IW Limited, you are required to : (*a*) Show the subdivisic [illegible]
the p [illegible]
June, [illegible]
cash at bank on the balance sheet [given in answer to (*c*) above] has been *obtained*.

On 30th June, 1968, I, W and C, each receiving a salary, shared profits and losses in the ratio 2 : 3 : 4 respectively. Their balance sheet at that date was as follows :

BALANCE SHEET

As at 30th June, 1968

	Rs.		Rs.
Capital *I*	4,460	Goodwill	1,480
,, *W*	4,260	Freehold buildings	3,690
,, C	6,240	Machinery	2,670
Creditors	4,320	Investments in *X* Ltd	3,850
		Stock	2,120
		Debtors	5,300
		Cast at bank	170
	Rs. 19,280		Rs. 19,280

You are advised that during the year to 30th June, 1969 :

(1) It was decided due to the illness of *C*, to dissolve the partnership on 31st December, 1968, with *C* taking over the investments at a value of Rs. 4,500.

(2) On 1st January, 1969, IW Limited was formed with an authorised capital of 30,000 ordinary shares of Re. 1 each to take over the remainder of the partnership assets and liabilities including cash. The purchase consideration was agreed at the partnership's net asset value at 31st December, 1968 of the items taken over, subject to the value of : (*i*) Goodwill being increased to Rs. 2,000 ; (*ii*) Freehold building being increased to Rs. 4,000 ; (*iii*) Machinery being reduced to Rs. 2,600. I and W were each allotted 5,000 shares at par, the balance being settled in cash when the three partners' respective share of profits was known at the end of the year to 30th June, 1969.

(3) IW Limited valued the assets in accordance with their cost, except for the creation immediately of a bad debt provision of Rs. 250, which was charged against goodwill.

(4) A finance company purchased 8,000 shares for Rs. 10,000.

(5) At 30th June, 1969 due to the pending introduction of a new range of products a stock write-off of Rs. 750 was made, thereby reducing the closing stock to Rs. 1,550.

(6) New machinery costing Rs. 5,000 was purchased on 1st April, 1969.

You are advised that at 30th June, 1969 in addition to balance arising from the above items, the following figures appeared in the books : Debtors, less bad debt provision Rs 6,200 ; Creditors 5,550 ; Net profit for the year to 30th June, 1969, Rs. 4,000.

The net profit was after charging partners' salaries I Rs. 700, W Rs. 800 and C Rs. 900, director's fees of Rs. 1,000 and depreciation of plant since 1st January, 1969 of Rs. 320. Subject to these items and stock write-off, which was borne by the company, the profit accrued evenly throughout the year. (C.W.A. Part, III England, 1969)

(*Net profits : Partnership Rs. 1,835 ; I.W. Limited Rs. 2,165 ; Realisation profit Rs. 1,410 ; Assets purchased by I.W. Limited Rs. 13,705 ; Balance sheet total Rs. 27,715 ;Cash shown in the balance sheet Rs. 6,435*)

[Hint : Knowledge of cash flow statement is essential for finding out the cash balance at the end.]

PROFIT PRIOR TO INCORPORATION

8. "*A*" Co. Ltd was incorporated on May 1, 1963, to take over business of "*X*" Co. Ltd as a going concern from January 1, 1963. The profit and loss account for the year ending December 31, 1963 is as follows :

PROFIT AND LOSS ACCOUNT OF "*A*" CO LTD

	Rs.		Rs.
Rent and taxes	12,000	Gross profit	1,55,000
Insurance	3,000		
Electricity charges	2,400		
Salaries	36,000		
Directors' fee	3,000		
Auditors' fee	1,600		
Commission	6,000		
Advertisement	4,000		
Discount	3,500		
Office expenses	7,500		
Carriage	3,000		
Bank charges	1,500		
Preliminary expenses	6,500		
Bad debts	2,000		
Interest on loan	3,000		
Net profit	60,000		
	Rs. 1,55,000		Rs. 1,55,000

The total turnover for the year ending December 31, 1963 was Rs. 5,00,000 divided into Rs. 1,50,000 for the period up to May 1, 1963 and Rs. 3,50,000 for the remaining period.

Ascertain the profits earned prior to incorporation of the company.

(C.A. Inter., 1964) 25·46

(*Profit prior to incorporation Rs. 18,617 ; Profit post-incorporation Rs. 41,383*)

[Hint : Auditors' fee and bank charges have been divided in time ratio]

9. Sanghi Bros Private Ltd was incorporated on June 30, 1967 to [illegible]

of which Rs. 5,40,000 was for the first six months (c) The expenses debited to profit and loss account included directors' fee Rs 15,000, bad debts Rs. 3,600 ; advertising Rs 12,000 (under a contract amounting to Rs. 1,000 per month) ; salaries and general expenses Rs. 64,000 ; preliminary expensee written off Rs. 5,000 , donation to the political party [illegible] by the company Rs. 5,000.

Prepare a statement showing the amount of profit made [illegible] poration and state how it should be dealt with in the [illegible] company. (B. Com., Sa[illegible])

(*Net profit prior to incorporation Rs. 68,380 ; Net pro*[illegible] *ratio*[illegible])

10. Jagjivan, the proprietor of an established business, decided to convert in into a limited company as from January 1, 1969. Accordingly, Jagira Private Limited was incorporated on April 1, 1969 with an authorised capital of Rs. 1,00,000 divided into 10,000 shares of Rs. 10 each of which 9,000 shares were issued for cash, Jagjivan retaining the balance as part consideration. Out of the proceeds of issue Jagjivan was paid Rs. 70,000 as the balance of the purchase consideration and Rs. 7,500 for expenses incurred by him in connection with the formation of the company, Jagjivan became the manager of the company as from January 1, 1969 at a monthly salary of Rs. 500. The accountant had not opened separate set of books and the trial balance as on December 31, 1969 extracted by the accountant was as under :

	Debit	Credit
Jagjivan's capital account	12,500	
Jagira Ltd.		90,000
Purchases and sales	2,20,000	3,00,000
General expenses	25,000	
Stock	9,000	
Wages and salaries	27,500	
Bad debts	1,750	
Debtors and creditors	50,000	33,250
Property	60,000	
Cash	17,500	
Rs.	4,23,250	Rs. 4,23,250

Jagjivan's salary had neither been paid nor adjusted in the accounts. Jagjivan was entitled to interest @ 6% p.a. from January 1, 1969 to the date of settlement which was on April 1, 1969. Stock as on December 31, 1969 was valued at Rs. 6,100. A revaluation as on January 1, 1969 of the property showed that it was worth Rs. 65,000. Of the bad debts, an amount of Rs. 750 is to be charged to Jagjivan on account of debts guaranteed by him. Jagjivan's capital as on January 1, 1969 was Rs. 65,000.

Show the profit and loss account for the year ended on and balance sheet as at December 31, 1969. (B. Com , Bombay, 1970)

(Net profit—Pre-incorporation Rs. 3,450 ; Post-incorporation Rs. 12,950 ; Rs. 5,700 ; Balance sheet total, Rs. 1,56,100)

11. A decides to convert his business into a limited company with effect from 1st January, 1978 and issues for cash 10,000 equity shares of Rs. 10 each at par to his friends and customers. From the proceeds the vendor was paid Rs. 80,000 plus the amount for reimbursement of his outlay in the formation of the company amounting to Rs. 4,200, the balance due being settled by the allotment of the remaining 2,000 shares at par. No new books were opened.

Following is the trial balance at 31-12-78

	Debits	Credits
Capital (Rs. 64,000 on 1-1-78)	20,000	
Formation expenses	4,200	
Shares issued		80,000
Purchases and sales	1,80,000	2,24,500
Stock on 1-1-78	13,000	
General expenses	16,000	
Bad debts	1,450	
Debtors and creditors	33,500	21,500
Furniture and fixtures	7,000	
Land	45,000	
Cash and bank balance	5,850	
	Rs. 3,26,000	Rs. 3,26,000

Stock on 31st December, 1978 Rs. 25,500.

The furniture and fixtures are revalued at R. 10,500 and debtors at Rs. 12,000 of which Rs. 1,100 proved to be bad.

A is to get a salary of Rs. 12,000 per annum commencing on the date of incorporation, *i.e.*, 1st March, 1978 and interest at 6% per annum to that date on the principal amount due to him.

Profit prior to incorporation to be calculated on time basis excluding *A*'s salary and interest to be charged against such profit. Prepare the trading and profit and loss account for the year ended 31st December, 1978 and the b[illegible] adjust-
ments, n[illegible]
tal has [illegible]
formatio[illegible]
amounts of salary and interest due to him have been paid. Ignore income-tax. [Adapted from B. Com., (Hons) Calcutta 1969]

(Goodwill Rs. 54,000 ; Capital reserve 5,408, Balance sheet total 1,55,950)

12 Navin Enterprise Ltd. was registered on April 1, 1971 to take over the business of Navin Bros from January 1, 1971. The company was granted certificate to commence business on May 31, 1971. From the following information given to you, you are required to calculate the profit earned by the company in pre- and post-incorporation periods :

(*a*) Sales during the period Jan. Dec. 1971 Rs. 2,40,000. The trend of sales was as under :

January and February	half the average sales in each month
May, June and July	average sales in each month
October	average sales
November and December	half the average sales in each month

(*b*) Cost of goods sold Rs. 60,000.

(*c*) Salary and other administrative charges Rs. 6,000.

(*d*) Bad debts Rs. 2,400.

(e) Interest on the purchase price paid by the company to Navin Bros on August 1, 1971 Rs. 2,100.

(f) Expenses exclusively related to company Rs. 8,900. 25·48

(Profit prior to incorporation Rs. 34,600 ! Profit in post-incorporation period Rs. 1,26,000)

13. A Public Limited Co, was formed to take over a running business with effect from 1st April, 1976. The company was incorporated on 1st August, 1976, and the certificate of commencement of business was received on 1st October, 1976. The following Profit and Loss A/c has been prepared for the year ended 31st March, 1977 :

	Rs.		Rs.
To Salaries	24,000	By Gross Profit b/d	1,60,000
To Printing & Stationery	2,400		
To Travelling Expenses	8,400		
To Advertisements	8,000		
To Miscellaneous Trade Expenses	18,900		
To Rent (Office building)	13,200		
To Electricity Charges	2,100		
To Directors' Fees	5,600		
To Bad Debts	1,600		
To Commission to Selling Agents	8,000		
To Audit Fees	3,000		
To Debenture Interest	1,500		
To Interest paid to Vendors	2,100		
To Selling Expenses	12,600		
To Depreciation on fixed Assets	4,800		
To Net Profit c/d	43,800		
	1,60,000		1,60,000

Relivant information :

(a) Total sales for the year, which amounted to Rs. 9,60,000 arose evenly up to the date of the certificate of commencement, whereafter they spurted to record an increase of two-thirds during the rest of the year.

(b) Rent of Office Building was paid @Rs. 1,000 per month up to September, 1976, and thereafter, it was increased by Rs. 200 per month.

(c) Travelling expenses include Rs. 2,400 towards Sales promotion.

(d) Depreciation includes Rs. 300 for assets acquired in the post-in corporation period.

(e) Purchase consideration was discharged by the Company on 30th September, 1976 by issuing Equity Shares of Rs. 10 each.

Prepare the Profit & Loss A/c in a columnar form, showing distinctly the allocation of profits between pre-incorporation and post-in corporation

periods, indicating the basis of allocation. [C.A. (Final) November 1977]

(Pre-incorporation profit Rs. 6,150 ; Post-incorporation profit Rs. 37,650)

14. A company, incorporated on 1st May, 1967 acquired a business with effect from 1st January, 1967. The first accounts were drawn up to September 30, 1967. The gross profit is Rs. 56,000. The general expenses are Rs. 14,220, Directors' remuneration Rs. 1,000 p.m. Formation expenses amounted to Rs. 1,500. Rent which till June 30, 1967 was Rs 100 p.m. was increased to Rs. 3,000 per annum from July 1, 1967. The manager of the earlier firm whose salary was Rs. 500 p.m. was made a director upon the incorporation and his remuneration thereafter is included in the figure of director's remuneration given earlier.

Prepare profit and loss account for the period, assuming that the net sales were Rs. 8,40,000. the monthly average for the first four months of 1967 being one-half of the remaining period.

(C.A. Final, May, 1969)

15. Nickle Plate Ltd. was registered on January 1, 1972, to buy the business of Messrs Daya Ram & Co. as on October 1, 1971 and obtained its certificate for commencement of business on February 1, 1972.

The accounts of the company for the period of 12 months ended September 30, 1972 disclosed the net profit of Rs. 67,540 after having charged the following amounts :

Salary	Rs. 15,000 (There were four employees in the pre-incorporation period and 7 in the post-incorporation period.)
Wages	Rs. 5,460 (There were four workers in the pre-incorporation period and five workers in the post-incorporation period and the rates of wages were Rs. 80 and Rs. 100 per month in pre- and post-incorporation periods, respectively.)
Sales	Rs. 2,40,000 of which Rs. 40,000 related to the pre-incorporation period.
Directors' salary	Rs. 8,000.

You are required to calculate profits separately for pre- and post-incorporation periods.

(Profit prior to incorporation period Rs. 12,6…

UNDERWRITING

16. Krishna underwrites the new issue of 2,000 shares of Rs. … each of Rama Company Limited The agreed commission was … able as to 60% in cash and the rest in fully paid shares … subscribed for 800 shares and the rest had to be taken up … writer. These shares were subsequently quoted in the … discount.

Make necessary journal entries in the books of the company and the underwriter and prepare share account in the books of underwriter.

(B. Com., Rajasthan, 1971) 25·38

17. A company issued 20,000 shares of Rs. 10 each at par which were under written as follows : *X* 10,000 shares ; *Y* 6,000 shares ; *Z* 4,000 shares.

Applications were received for 18,000 shares which included marked applications also as follows : *X* 4,000 shares ; *Y* 2,000 shares ; *Z* 10,000 shares.

You are required to prepare a statement showing how many more shares underwriters will have to take under the underwriting contract. 25·39

(Extra shares taken by X 1,000 and by Y 1,000)

18. A company issued 30,000 shares of Rs. 10 each. These shares were underwritten as follows : *X* 18,000 shares ; *Y* 7,500 ; *Z* 4,500 shares.

In addition to the above underwriting there was a firm underwriting as follows : *X* 2,400 ; shares ; *Y* 900 shares ; *Z* 3,000 shares.

Total subscriptions received by the company (excluding firm underwriting and marked applications) were 4,500 shares.

The applications were marked as follows : *X* 3,000 shares ; *Y* 6,000 ; shares *Z* 1,500 shares.

You are required to determine the liability of underwriters. 25·42

(X 7,560 ; Z 1,140)

19. *X* Co Ltd, which carries on the bunsiness of underwriting shares underwrote 15,000 shares of Rs. 10 each in a new issue made by *A* Co Ltd. The agreed commission was 5% payable as to 70% in fully paid shares and the balance in cash. In addition to underwriting these shares *X* Co Ltd made "firm application" in the ordinary course for another 2,500 shares.

The issue was not fully subscribed by the public and the underwriting company was obliged to take up 30% of the shares underwritten. The shares in *A* Co Ltd were consequently quoted at a discount of 12%.

Prepare necessary accounts showing the position in the books of *X* Co Ltd. (C.A. Inter, 1964) 25·43

[Hints : 1. Commission account will be credited by Rs. 7,500. This account will be transferred to profit and loss account.

2. Shares, in *A* Co Ltd account will show the debit of Rs. 75,254 which includes Rs. 45.000 for shares allotted. Rs. 25,000 for shares firm underwritten ; and Rs. 5,250 for shares allotted to pay commission. The fall in the value of shares Rs, 9,030 will be debited to profit and loss account and credited to either shares in A Co Ltd. account investment flucthation account]

20. *X* Co Ltd was formed with a capital of Rs. 10,00,000 in Rs. 10 shares, the whole amount being issued to the public. The underwriting of these shares was as follows :

M	35,000	*N*	30,000	*O*	20,000
P	10,000	*Q*	3,000	*R*	2,000

All the marked application forms were to go in relief of the underwriters whose names they bore. The application forms marked by the underwriters were :

M	10,000	*N*	22,500	*O*	20,000
P	7,500	*Q*	5,000	*R*	Nil

Applications for 20,000 shares were received on forms not marked. Draw up a statement showing the number of shares each underwriter had to take up. 25·44

(Institute of Company Secretaries of India, Final Examination, 1971)

(*M takes 13,649 shares ; R takes 1,351 shares ; N, O, P and Q take Nil shares*)

21. *A* Co Ltd has authorised capital of Rs 50,00,000 divided into 1,00,000 equity shares of Rs. 50 each. The company issued for subscription 50,000 shares at a premium of Rs. 10 each. The entire issue was underwritten as follows :

X 30,000 shares (Firm underwriting—5,000 shares)
Y 15,000 shares (Firm underwriting—2,000 shares)
Z 5,000 shares (Firm underwriting—1,000 shares)

Out of the total issue 45,000 shares, including firm underwriting, were subscribed. The following were the marked forms :

X 16,000 shares
Y 10,000 shares
Z 4,000 shares

Calculate the liability of each underwriter. 25·45

(Institute of Company of Secretaries of India, Final Examination, 1969)

(*Total liability including the liability in respect of firm underwriting : X 9,667 shares ; Y 2,333 shares ; Z 1,000 shares*)

22. Rosy Ltd made a public issue of 4,00,000 equity shares of Rs. 10

[illegible]

...any number of shares in ... 1/2% of the par value

Applications received were to be analysed on the basis of rubber stamp of the underwriter, who was to be given credit for the number of [illegible]

As a result of the issue the follwing applications were received :

Marked applications : *A* 1,02,000 shares ; *B* 95,000 shares ; *C* 60,000 shares ; *D* 32,000 shares ; *E* 51,000 shares. Direct applications 10,000 shares. Total : 3,50,000 shares.

Included in the number of applications mentioned against *D* was an application made by *D* himself for 10,000 shares. The underwriters were informed of the amounts due to or from them and the amounts were duly received or paid.

Show with the aid of necessary workings, the entries to record the amounts so received or paid.

[C. A. (Final) Nov. 1969]

(Net liability B 1,000 shares ; C 36,000 shares ; D 6,400 shares ; E 6,600 shares ; Amounts payable A Rs. 20,000 ; B Rs. 18,000 ; Amounts receivable C Rs. 52,000 ; D Rs. 4,300 ; E Rs. 1,200)

SUGGESTED READING

1. *Accountancy*—William Pickles
2. *A Modern Approach to Company Accounts*—John Kellock
3. Lectures on Company Law—Shah
4. *Business Accounting*, Vol. II—F. Wood

5

Company Accounts—Final Statements

The basic rules of preparing company profit and loss account and balance sheet remain the same as used in the case of a sole trader or a partnership concern. In spite of this, it is a job in itself to prepare them correctly. In order to understand their preparation, the chapter has been divided into the following six sections :

(1) Statutory contents of final statements, *i.e.* (*i*) Balance sheet, (*ii*) Profit and loss account, and (*iii*) Directors' Report ;

(2) Accounting treatment of various new accounts and adjustments which are not found in the problems on final accounts of a sole trader's or partnership firm's business ;

(3) Calculation of managerical remuneration keeping in view the legal provisions ;

(4) Meaning of divisible profit and accounting treatment of dividend;

(5) Guidelines on the issue of bonus shares and accounting treatment in final accounts ; and

(6) Solved examination problems for giving students an idea of examination standard.

1—CONTENTS OF FINAL STATEMENTS

General Information. The Companies Act has made it compulsory for every company to keep proper set of books for recording financial transactions and to prepare its annual statements in the prescribed form at the proper time. The provisions governing the keeping of books and the publication of final accounts have been laid down under Secs. *209 to* 223. A brief review of these provisions has been given below :

Preparation of final statements. Under Sec. 210 it has been made compulsory to present the balance sheet and profit and loss account, at every annual general meeting

The period to which the account aforesaid relates is referred to in this Act as a 'financial year', and it may be less than a calendar year, but it shall not exceed fifteen months provided that it may extend to eighteen months where special permission has been granted in that behalf by the Registrar.

(1) An analysis of Section 210 reveals the following points in relation to the preparation of final accounts.

(*a*) The responsibility for the preparation of final accounts and placing them before the annual general meeting is placed on the [illegible]. The directors may however entrust this duty to a [illegible] person in a position to discharge the same, in which [illegible] lity will devolve on such a person.

(*b*) In the case of companies not carrying on business for profit, an income and expenditure account will be prepared instead of a profit and loss account.

(*c*) If the directors or the person to whom the directors entrust the responsibility of the preparation of final accounts, fail to comply with the provisions of this section, they are punishable for each offence, with imprisonment for a term which may extend to six months or with fine which may extend to one thousand rupees or with both. However, the punish ment of imprisonment is given only when the offence is committed wilfully.

(2) *Form and contents of profit and loss account and balance sheet.* According to Sec. 211 every balance sheet and profit and loss account of a company shall give a true and fair view of the state of affairs of the company and further, the balance sheet shall be in the form set out in Schedule VI or as near thereto as circumstances admit or in such other form as may be approved by the Central Government either generally or in any particular case The set form for the preparation of balance sheet has been given in Part I of the Schedule and the requiremets for the preparation of the profit and loss account are given in Part II of that Schedule.

Banking, Insurance and Electricity companies which are governed by special statutes have different forms prescribed for the profit and loss account and the balance sheet under the respective statutes.

(3) *Disclosure of interest in the subsidiary company.* As per Sec. 212 if a company happens to be a holding company, the following documents relating to subsidiary company shall be attached to its balance sheet; (*a*) a copy of the balance sheet of the subsidiary company; (*b*) a copy of its profit and loss account; (*c*) a copy of directors' report; (*d*) a copy of the reports of its auditors; and (*e*) a statement of the holding company's interest in the subsidiary.

(4) *Report.* The auditor's report (including separate, special or supplementary report, if any) and directors' report shall be attached to the balance sheet of the company.

(5) *Authentication of balance sheet and profit and loss account.* As per Sec. 215, every balance sheet and every profit and loss account of a company shall be signed on behalf of the board of directors by its manager or secretary, if any, and by not less than two directors of the company one of whom shall be a managing director where there is one.

(6) *Filing of accounts.* Under Sec. 220 within thirty days of the annual general meeting every company has to file with the Registrar three copies of balance sheet and profit and loss account and three copies of all documents which are required to be attached with the balance sheet.

Balance Sheet

Sec. 211 provides that the 'balance sheet' shall give a true and fair view of the state of affairs of the company as at the end of the financial year and shall be in the prescribed from set out in Part I of Schedule VI or as near thereto as circumstances admit "or in such other form as may be approved by the Central Government generally or in any particular case."

(See Sec. 211)

A—HORIZONTAL FORM OF BALANCE SHEET

BALANCE SHEET OF.........(Here enter the name of the company) *as at*.........(Here enter the date as at which the balance sheet is made out)

Figures for the previous year Rs.	LIABILITIES	*Figures for the current year* Rs.	*Figures for the previous year* Rs.	ASSETS	*Figures for the current year* Rs.
	SHARE CAPITAL : Authorised...shares of Rs.. each. Issued : (distinguishing between the various classes of capital and stating the particulars specified below, in respect of each class) ..shares of Rs... each. Subscribed : (distinguishing between the various classes of capital and stating the particulars specified below, i respect of each class...shares of Rs.. each Rs... called up. Of the above shares...shares are allotted as fully paid up pursuant			FIXED ASSETS : Distinguishing as far as possible between expenditure upon : (*a*) goodwill, (*b*) land, (*c*) buildings, (*d*) leaseholds, (*e*) railway sidings, (*f*) plant and machinery, (*g*) furniture and fittings, (*h*) development of property, (*i*) patents, trade marks and designs, (*j*) livestock, (*k*) vehi.les, *etc.* Notes : (1) Under each head the original cost and the additions thereto and deductions therefrom during the year, and *the total depreciation*	

Figures for the previous year Rs.	LIABILITIES	Figures for the current year Rs.	Figures for the previous year Rs.	ASSETS	Figures for the current year Rs.
	to a contract without payments being received in cash. Of the above shares...shares are allotted as fully paid up by way of bonus shares. (Specify the source from which bonus shares are issued, *e.g.*, capitalisation of profits or reserves or from share premium account.) *Less* : Calls unpaid : (*i*) By directors. (*ii*) By others. *Add* : Forfeited shares : (amount originally paid up) (Any capital profit on re-issue of forfeited shares should be transferred to capital reserve.) 1. Terms of redemption or conversion (if any) of any redeemable preference capital are to be stated together with earliest date of redemption or conversion.			written off or provided up to the end of the year are to be stated. Depreciation written off or provided shall be allocated under the different asset heads and deducted in arriving at the value of fixed assets. (2) Where the original cost aforesaid and additions and deductions thereto, relate to any fixed asset which has been acquired from a country outside India, and in consequence of a change in the rate of exchange at any time after the acquisition of such asset, there has been an increase or reduction in the liability of the company, as expressed in Indian currency, for making payment, towards the whole or a part of the cost of the asset or for the repayment of the whole or part of moneys borrowed by the company from any person, directly or indirectly in any foreign currency specially for the purpose of acquiring the asset (being in either	

un-issued share capital are to be specified. 3. Particulars of the different classes of preference shares are to be *given*. 4. In the case of subsidiary companies the number of shares held by the holding company as well as by the ultimate holding company and its subsidiaries shall be separately stated in respect of subscribed share capital. The auditor is not required to certify the correctness of such shareholdings as certified by the *management*.		case the liability existing immediately before the date on which the change in the rate of exchange takes effect), the amount by which the liability is so increased or reduced during the year, shall be added to, or, as the case may be, deducted from the cost, and the amount arrived at after such addition or deduction shall be taken to be the cost of the fixed asset. *Explanation* : In this paragraph unless the context otherwise requires, the expressions "rate of exchange" "*foreign currency*" and "Indian currency" shall have the meanings respectively assigned to them under sub-section (1) of Section 43 A of the Income-tax Act, 1961 and explanation 2 and *explanation 3 of the said sub*-section shall, as far as may be, apply in relation to the said paragraph as they apply to the said sub-section (1). *(3) In every case where the original* cost cannot be ascertained, without unreasonable expense or delay, the valuation shown by the books is to be given. For the purpose of this paragraph, such valuation shall be the net amount

Figures for the previous year Rs.	LIABILITIES	Figures for the current year Rs.	Figures for the previous year Rs.	ASSETS	...year Rs.
				at which an asset stood in the company's books at the commencement of this Act after deduction of the amounts previously provided or written off for depreciation or diminution in value, and where any such asset is sold the amount of sale proceeds, shall be shown as deduction. (4) Where sums have been written off on a reduction of capital or a revaluation of assets, every balance sheet (after the first balance sheet) subsequent to the reduction or revaluation shall show the reduced figures and with the date of the reduction in place of the original cost. (5) Each balance sheet for the first five years subsequent to the date of the reduction, shall show also the amount of the reduction made. (6) Similarly, where sums have been added, by writing up the assets, every balance sheet subsequent to such writing up shall	

RESERVES AND SURPLUS : 1. Capital reserves 2. Capital redemption reserve 3. Share premium account (showing details of its utilisation in the manner provided in Sec. 78 in the year of utilisation) 4. Other reserves specifying the nature of each reserve and the amount in respect thereof. *Less* : Deb t balance in profit and loss account (if any) (The debit balance in the profit and loss account shall be shown as a deduction from the uncommitted reserves, if any) 5. Surplus, *i.e.*, balance in profit and loss account after providing for proposed allocations, namely, dividend, bonus or reserves. 6. Proposed additions to reserves. 7. Sinking funds.		show the increased figures with the date of the increase in place of the original cost. Each balance sheet for the first five years subsequent to the date of the writing up shall also show the amount of increase made. INVESTMENTS : Showing nature of investment and mode of valuation, for example, cost or market value, and distinguishing between— 1. Investments in government or *trust securities* 2 Investments in shares, debentures or bonds. (Showing separately shares, fully paid up and partly paid up and also distinguishing the different classes of shares and showing also in similar details investments in shares, debentures or bonds of subsidiary companies.) 3. Immovable properties. 4. Investment in the capital of partnership firms. Notes : (1) Aggregate amount of company's quoted investments and also the market value thereof shall be shown.

Figures for the previous year Rs.	LIABILITIES	Figures for the current year Rs.	Figures for the previous year Rs.	ASSETS	year Rs.
				at which an asset stood in the company's books at the commencement of this Act after deduction of the amounts previously provided or written off for depreciation or diminution in value, and where any such asset is sold the amount of sale proceeds, shall be shown as deduction. (4) Where sums have been written off on a reduction of capital or a revaluation of assets, every balance sheet (after the first balance sheet) subsequent to the reduction or revaluation shall show the reduced figures and with the date of the reduction in place of the original cost. (5) Each balance sheet for the first five years subsequent to the date of the reduction, shall show also the amount of the reduction made. (6) Similarly, where sums have been added, by writing up the assets, every balance sheet subsequent to such writing up shall	

RESERVES AND SURPLUS : 1. Capital reserves 2. Capital redemption reserve 3. Share premium account (showing details of its utilisation in the manner provided in Sec. 78 in the year of utilisation) 4. Other reserves specifying the nature of each reserve and the amount in respect thereof. *Less* : Deb t balance in profit and loss account (if any) (The debit balance in the profit and loss account shall be shown as a deduction from the uncommitted reserves, if any.) 5. Surplus, *i e.*, balance in profit and loss account after providing for proposed allocations, namely, dividend, bonus or reserves. 6. Proposed additions to reserves. 7. Sinking funds.			show the increased figures with the date of the increase in place of the original cost. Each balance sheet for the first five years subsequent to the date of the writing up shall also show the amount of increase made. INVESTMENTS : Showing nature of investment and mode of valuation, for example, cost or market value, and distinguishing between— 1. Investments in government or trust securities. 2. Investments in shares, debentures or bonds. (Showing separately shares, fully paid up and partly paid up and also distinguishing the different classes of shares and showing also in similar details investments in shares, debentures or bonds of subsidiary companies.) 3. Immovable properties. 4. Investment in the capital of partnership firms. Notes : (1) Aggregate amount of company's quoted investments and also the market value thereof shall be shown.

Figures for the previous year Rs.	LIABILITIES	Figures for the current year Rs.	Figures for the previous year Rs.	ASSETS	Figures for the current year Rs.
	Notes : (1) Additions and deductions since last balance sheet to be shown, under each of the specified heads. (2) The word "fund" in relation to any "reserve" should be used only where such reserve is specifically represented by earmarked investments. SECURED LOANS : 1. Debentures. 2. Loans and advances from banks. 3. Loans and advances from subsidiaries. 4. Other loans and advances. Notes : (1) Loans from directors and manager should be shown separately. ... accrued and due on ... included			(2) Aggregate amount of company's unquoted investments shall also be shown. CURRENT ASSETS, LOANS AND ADVANCES : (A) CURRENT ASSETS : 1. Interest accrued on investments. 2. Stores and spare parts. 3. Loose tools. 4. Stock-in-trade. 5. Works-in-progress. Notes : (1) In respect of (2) and (4), mode of valuation of stock shall be stated and the amount in respect of raw materials shall also be stated separately where practicable. (2) Mode of valuation of works-in-progress shall be stated. 6. Sundry debtors : (a) Debts outstanding for a period exceeding six m	

(3) The nature of security to be specified in each case.

(4) Where loans have been guaranteed by managers and/or directors, a mention thereof shall also be made and also the aggregate amount of such loans under each head.

(5) In case of debentures, terms of redemption or conversion (if any) are to be stated together with earliest date of redemption or conversion.

UNSECURED LOANS :

1. Fixed deposits.
2. Loans and advances from subsidiaries.
3. Short-term loans and advances :
   (a) From Banks.
   (b) From others.

[Short-term loans include those which are due for repayment not later than one year as at the date of the balance sheet]

4. Other loans and advances :
   (a) From banks.
   (b) From others.

(b) Other debts.

Less Provision.

Notes :

(1) The amounts to be shown under sundry debtors shall include the amounts due in respect of goods sold or services rendered or in respect of other contractual obligation but shall not include the amounts which are in the nature of loans or advances.

(2) In regard to sundry debtors particu'ars to be given separately of—

(a) debts considered good and in respect of with the company is fully secured ;

(b) debts considered good for which the company holds no security other than the debtors' personal security ; and

(c) debts considered doubtful or bad.

(3) Debts due by directors or other officers of the company or any of them either severally or jointly with any other person or debts due by firms or private companies respectively in which

Figures for the previous year Rs.	LIABILITIES	Figures for the current year Rs.	Figures for the previous year Rs.	ASSETS	Figure for the current year Rs.
	Notes : (1) Loans from directors and manager should be shown separately. (2) Interest accrued and due on unsecured loans should be included under the appropriate sub-[illegible]s under the head "Unsecured [illegible]". (3) Where loans have been guaranteed by manager, and/or directors, a mention thereof shall also be made together with the aggregate amount of such loans under each head. This does not apply to fixed deposits. CURRENT LIABILITIES AND PROVISIONS : A. CURRENT LIABILITIES 1. Acceptances. 2. Sundry creditors. 3. Subsidiary companies. 4. Advance payments and unexpired discounts for the portion for which value has still to be			any director is a partner or a director or a member to be separately stated. (4) Debts due from other companies under the same management within the meaning of sub-section (IB) of Sec. 270 to be disclosed with the name of the companies. (5) The maximum amount due by directors or other officers of the company at any time during the year to be shown by way of a note. (6) The provision to be shown under this head should not exceed the amount of debts stated to be considered doubtful or bad and any surplus of such provision, if already created, should be shown at every closing under "Reserves and Surplus" (on the Liabilities side) under a separate subhead ["Reserve for Doubtful or Bad Debts."] **(7A) Cash balance on hand.**	

given, *e.g.*, in the case of the following companies ;

Newspaper, fire insurance, theatres, clubs, banking, steamship companies, etc.

5. Unclaimed dividends.

6. Other liabilities (if any)

7. Interest accrued but not *due on loans.*

B. PROVISIONS

8. Provision for taxation.

9. Proposed dividends.

10. For contingencies.

11. For provident fund scheme.

12. For insurance, pension and similar staff benefit scheme.

13. *Other provisions.*

A footnote to the balance sheet may be added to show *separately* :

1. Claims against the company not acknowledged as debts.

2. *Uncalled liability* on shares partly paid.

3. Arrears of fixed cumulative dividends.

(7B) Bank balances—

(*a*) with scheduled banks.
(*b*) with others.

Notes :

[In regard to bank balances particulars to be given separately—

(*a*) the balance lying with scheduled banks on current accounts, call *accounts* and deposit accounts ;

(*b*) the names of the bankers *other than scheduled* banks and the balances lying with each such banker on current account, call account and deposit account and the maximum amount outstanding at any time during the year with each such banker ; and

(*c*) the nature of the interest, if any, of any director or his relative in each of the banks (other than scheduled banks referred to in *(b) above.)*

(B) LOANS AND ADVANCES :

(8) (*a*) Advances and loans to subsidiaries.

Figures for the previous year Rs.	LIABILITIES	Figure for the current year Rs.	Figures for the previous year Rs.	ASSETS	Figures for the current year Rs.
	[The period for which the dividends are in arrear or if there is more than one class of shares, the dividends on each such class are in arrear, shall be stated. The amount shall be stated before deductions of income tax, except that in the case of tax-free dividends the amount shall be shown free of income-tax and the fact that it is so shown shall be stated.] 4. Estimated amount of contracts remaining to be executed on capital account and not provided for. 5. Other moneys for which the company is contingently liable. [The amount of any guarantees given by the company on behalf of directors or other officers of the company shall be stated and, where practicable, the general nature and amount of each such contingent liability, if material, shall also be specified.]			(*b*) Advances and loans to partnership firms in which the company or any of its subsidiaries is a partner. (9) Bills of exchange. (10) Advances recoverable in cash or in kind or for value to be received, *e.g.*, rates, taxes, insurance, etc. (11) Balance with Customs, Port Trust, etc. (where payable on demand). Notes : (1) The instructions regarding sundry bebtors apply to "Loans and Advances" also. (2) The amounts due from other companies under the same management within the meaning of sub-section (IB) of Sec. 370 should also be given with the names of the companies ; the maximum amount due from every-one of these at any time during the year must be shown.	

			MISCELLANEOUS EXPENDITURE : (to the extent not written off or adjusted) : (1) Preliminary expenses. (2) Expenses including commission or brokerage on underwriting or subscription of shares or debentures. (3) Discount allowed on the issue of shares or debentures. (4) Interest paid out of capital during construction (also stating the rate of interest). (5) Development expenditure not adjusted. (6) Other sums (specifying nature). PROFIT AND LOSS ACCOUNT [Show here the debit balance of profit and loss account carried forward after deduction of the uncommitted reserves, if any.]	

B—VERTICAL FORM OF BALANCE SHEET

Name of the Company..............................

Balance Sheet as at..............................

(I) SOURCES OF FUNDS	Schedule No.	Figures as at the end of current financial year.	Figures as at the end of previous year
(1) Shareholders' Funds			
(a) Capital	....	....	....
(*b*) Reserves and Surplus	....	....	....
(2) Loans Funds			
(*a*) Secured Loans	....	....	....
(*b*) Unsecured Loans	....	....	....
(II) APPLICATION OF FUNDS			
(1) Fixed Assets			
(*a*) Gross Block	....	....	....
(*b*) Less depreciation	....	....	....
(*c*) Net Block	....	....	....
(*d*) Capital work in progress	....	....	....
(2) Investments			
(3) Current Assets : Loan & Advances			
(*a*) Inventories	....	....	....
(*b*) Sundry debtors	....	....	....
(*c*) Cash and bank balances	....	....	....
(*d*) Other Current Assets	....	....	....
(*e*) Loans & Advances	....	....	....
LESS : **Current Liabilities and Provisions :**			
(*a*) Liabilities	....	....	....
(*b*) Provisions	....	....	....
Net Current Assets	....	....	....
(4) (*a*) Miscellaneous expenditure to the extent not written off or adjusted	....	....	....
(*b*) Profit & Loss Account	....	....	....
TOTAL	....	....	....

Notes : (1) Details under each of the above items shall be given in eparate schedules. The schedules shall incorporate all the information equired to be given under Part 1 A of the Schedule VI read with notes ontaining general instructions for preparation of Balance Sheet.

(2) The schedules, referred to above, accounting policies and explanatory notes that may be attached shall form an integral part of the alance sheet.

(3) The figures in the balance sheet may be rounded off to the earest '000 or '00 as may be convenient or may be expressed in terms f decimals of thousands.

(4) A foot note to the balance sheet may be added to shown separately contingent liabilities".

(Presentation of balance sheet in the vertical form is show in llustration 95. Page 4·266.

GENERAL NOTES

(1) Dividends declared by subsidiary companies after the date of he balance sheet should not be included unless they are in respect of eriod which closed on or before the date of the balance sheet.

(2) Any reference to benefits expected from contracts to the extent ot executed shall not be made in the balance sheet but shall be made n the Board's report.

(3) Particulars of any redeemed debentures which the company has ower to issue should be given.

(4) Where any of the company's debentures are held by a nominee r a trustee for the company, the nominal amount of the debentures and he amount at which they are stated in the books of the company shall be tated.

(5) A statement of investments (whether shown under "Investments" r under "Current Assets" as stock-in trade) separately classifying trade nvestments and other investments should be annexed to the balance sheet howing the names of the bodies corporate under the same management n whose shares or debentures investments have been made (including all nvestments whether existing or not, made subsequent to the date as at which the previous balance sheet was made out) and the nature and extent f the investments so made in each such body corporate ; provided that n the case of an investment company, that is to say a company whose rincipal business is the acquisition of shares, stock, debentures or other [illegible] investments

[illegible], the

[illegible] and

[illegible]

A "Trade investment" means an investment by a company in the hares or debentures of another company, not being its subsidiary, for the urpose of promoting the trade or business of the first company.

(6) If, in the opinion of the Board, any of the current assets, loans and advances have not a value on realisation in the ordinary course of business at least equal to the amount at which they are stated, the fact that the Board is of that opinion shall be stated.

(7) Except in the case of the first balance sheet laid before the company after the commencement of the Act, the corresponding amounts of the immediately preceding financial year for all items shown in the balance sheet shall also be given in the balance sheet. The requirement in this behalf shall, in case of companies preparing quarterly or half-yearly accounts, etc., relate to the balance sheet for the corresponding date in the previous year.

(8) Current accounts with directors and manager, whether they are in credit or debit, shall be shown separately.

(9) The information required to be given under any of the items or sub-items in the Form, if it cannot be conveniently included in the balance sheet itself, shall be furnished in a separate Schedule to be annexed to and form part of the balance sheet. This is recommended when items are numerous.

While preparing the balance sheet, the following Notification of the Reserve Bank should also be kept in view. As per the Notification issued by the Reserve Bank of India, the unsecured loans including unsecured debentures and loans guaranted by directors and also loans from shareholders other than from directors but excluding loans from foreign ›urces and loans, debentures and bonds guaranteed by Central or State Government will be treated as deposits and will be subject to a ceiling of 25% of the paid-up capital *plus* free reserves of the company (reduced by accumulated losses, if any, as disclosed in the balance sheet) with effect from 1st Jan., 1972 and will not be for a period less than 12 months (6 months in case of hire-purchase finance companies).

This is in addition to the ceiling imposed on deposits with effect from 1st Jan., 1967.

The two together will not exceed 50% of the paid-up capital *plus* free reserves.

(Existing companies have been given time up to 31st March 1975 to adjust the excess in three equal instalments.)

In view of the requirements of Sec. 205A of the Companies Act, it is desirable to open a separate bank account for the dividends payable. Any balance in the account representing unclaimed dividends will be transferred to the Central Government after a period of three years. As such these separate accounts opened for the payment of dividend must appear under the head bank balances in the balance sheet.

Profit and loss account. As recommended by the Bhabha Committee, no standard form has been prescribed by law for the profit and loss account (or income and expenditure account) of a company. However, it has been laid down as to what it shall contain and disclose.

According to Sec. 211(2), every profit and loss account of a company shall give a true and fair view of the profit or loss of the company

for the financial year, and shall comply with the requirements of Part II of Schedule VI, so far as they are applicable thereto and disclose information accordingly. This requirement does not apply to a banking or an insurance company or to any other class of companies for which a form of profit and loss account has been specified in the separate Acts governing such companies or to that class of companies specially exempted by the Central Government in public interest.*

In order to disclose the true profit or loss of a company for the financial year, it is necessary that the profit and loss account should be so drawn up that a balance shown at some stage in the account can properly be described as the profit or loss for the financial year, and the items set out later in the account can be seen to be :

(*a*) matters not relative to a fair ascertainment of the profit or loss for the year ;

(*b*) adjustments on account of previous year ; and

(*c*) appropriations of the profits including the balance brought forward.

Contents of the profit and loss account. According to Part II of Schedule VI the following are the requirements as to the profit and loss account.

(1) The provisions of this part shall apply to the income and expenditure account referred to in sub-section (2) of Section 210 of the Act, in like manner as they apply to a profit and loss account, but subject to the modification of references as specified in that sub-section.

(2) The profit and loss account—

(*a*) shall be so made out as clearly to disclose the result of the working of the company during the period covered by the account ; and

(*b*) shall disclose every material feature, including credits or receipts and debits or expenses in respect of non-recurring transactions or transactions of an exceptional nature.

3. The profit and loss account shall set out the various items relating to the income and expenditure of the company arranged under the most convenient heads ; and in particular, shall disclose the following information in respect of the period covered by the account—

(*i*) (*a*) The turnover, that is, the aggregate amount for which sales are effected by the company, giving the amount of sales in respect of each class of goods dealt with by the company, and indicating the quantities of such sales in each class separately.

(*b*) Commission paid to sole selling agents within the meaning of Sec. 294 of the Act.

(*c*) Commission paid to other selling agents.

* Under the Act of 1956, the phrase was "national interest" which did not convey any specific meaning.

(*d*) Brokerage and discount on sales, other than the usual trade discount.

(*ii*) (*a*) In the case of manufacturing companies :

(1) The value of the raw materials consumed, giving item-wise break-up and indicating the quantities thereof. In this break-up, as far possible, all important basic raw materials shall be shown as separate items. The intermediates or components procured from other manufacturers may, if their list is too large to be included in the break-up, be grouped under suitable headings without mentioning the quantities, provided all those items which in value individually account for 10% or more of the total value of the raw material consumed shall be shown as separate and distinct items with quantities thereof in the break-up.

(2) The opening and closing stocks of goods produced, giving break-up in respect of each class of goods and indicating the quantities thereof.

(*b*) In the case of trading companies, the purchases made and the opening and closing stocks, giving break-up in respect of each class of goods traded in by the company and indicating the quantities thereof.

(*c*) In the case of companies rendering or supplying services, the gross income derived from services rendered or supplied.

(*d*) In the case of a company, which falls under more than one of the categories mentioned in (*a*), (*b*) and (*c*) above, it shall be sufficient compliance with the requirements herein if the total amounts are shown in respect of the opening and closing stocks, purchases, sales and consumption of raw material with value and quantitative break-up and the gross income from services rendered is shown.

(*e*) In the case of other companies, the gross income derived under different heads.

Notes : (1) The quantities of raw materials, purchases, stocks and the turnover shall be expressed in quantitative denominations in which these are normally purchased or sold in the market.

(2) For the purpose of items (2) (*a*), (2) (*b*) and (2) (*d*) the items for which the company is holding separate industrial licences, shall be treated as separate classes of goods but where a company has more than one industrial licence for production of the same item at different places or for expansion of the licensed capacity, the item covered by all such licences shall be treated as one class. In the case of trading companies, the imported items shall be classified in accordance with the classification adopted by the Chief Controller of Imports and Exports in granting the import licences.

(3) In giving the break-up of purchases, stocks and turnover, items like spare parts and accessories, the list of which is too large to be included in the break-up may be grouped under suitable headings without quantities, provided all these items, which in value individually account

for 10% or more of the total value of purchases, stocks, or turnover, as the case may be, are shown as separate and distinct items with quantities thereof in the break-up.

4. In the case of all concerns having works-in-progress, opening and closing figures of works completed.

5. The amount provided for depreciation, renewals or diminution in value of fixed assets.

If such provision is not made by means of a depreciation charge, the method adopted for making such provision. If no provision has been made, the fact shall be stated [and the quantum of arrears of depreciation computed in accordance with Sec. 205(2) of the Act shall be disclosed by way of a note].

6. The amount of interest on the company's debentures and other fixed loans, *i.e.*, loans for fixed periods stating separately the amount of interest, if any, paid or payable to the managing director, or the manager, if any.

7. The amount of cha [illegible] taxation on profits, including, [illegible] any taxation imposed elsewh[illegible] Indian *income-tax and distinguishing, where practicable,* between income-tax and other taxation.

8. The amounts (reserved) for—

(*a*) repayment of share capital ; and

(*b*) repayment of loans.

9. (*a*) The aggregate, if material, of any *amounts set aside* or *proposed to be set aside to reserves, but not including a provision* made to meet any specific liability, contingency or commitment known to exist at the date as at which the balance sheet is made up.

(*b*) The aggregate, if material, of any amounts withdrawn from such reserves.

10. (*a*) The aggregate, if material, of the *amounts set aside* to provisions made for meeting specific liabilities, contingencies or commitments.

(*b*) The aggregate, if material, of the amounts withdrawn from such provisions, as no longer required.

11. Expenditure incurred on each of the following items, separately for each item :

(*a*) Consumption of stores and spare parts.

(*b*) Power and fuel.

(*c*) Rent.

(*d*) Repairs to buildings.

(*e*) Repairs to machinery.

(*f*) (*i*) Salaries, wages and bonus,

(*ii*) Contribution to provident and other funds, and

(*iii*) Workmen and staff welfare expenses (to the exte[illegible] adjusted from any previous provision or reserve).

Notes : (I) Information in respect of this item should [illegible] in the balance sheet under the relevant provision or reserve [illegible]

(2) In respect of sub-items (*i*) and (*ii*), the profit and loss account shall also contain, by way of a note, break-up of the expenditure incurred on employees who (*i*) if employed throughout the financial year were in receipt of remuneration for that year which in the aggregate was not less than Rs. 36,000 or (*ii*) if employed for a part of the financial year where in receipt of remuneration for any part of that year at a rate which in the aggregate was not less than Rs. 3,000 per month. The said note shall also indicate the number of employees falling in each of the above two categories. Remuneration for this purpose has the same meaning as in the Explanation to Sec. 198 and shall further include honoraria. The monetary value of the perquisites shall be calculated in accordance with the provisions of the Income-tax Act, 1961 (43 of 1961) and the rules made thereunder

(*g*) Insurance.

(*h*) Rates and taxes, excluding taxes of income.

(*i*) Miscellaneous expenses.

"provided that any item under which the expenses exceed 1% of the total revenue of the company or Rs. 5,000 whichever is higher, shall be shown as a separate and distinct item against an appropriate account head in the profit and loss account and shall not be combined with any other item to be shown under "Miscellaneous Expenses".

12 (*a*) The amount of income from investments distinguishing between trade investments and other investments.

(*b*) Other income by way of interest, specifying the nature of the ome.

(*c*) The amount of income-tax deducted if the gross income is stated under sub-paragraphs (*a*) and (*b*) above.

13. (*a*) Profits or losses on investments showing distinctly the extent of the profits or losses earned or incurred on account of membership of a partership firm, to the extent not adjusted from any previous provision or reserve.

Notes : (*a*) Information in respect of this item should also be given in the balance sheet under the relevant provisions or reserve account.

(*b*) Profits or losses in respect of transactions of a kind, not usually undertaken by the company or undertaken in circumstances of an exceptional or non-recurring nature, if material in amount.

(*c*) Miscellaneous incomes.

14. (*a*) Dividends from subsidiary companies.

(*b*) Provisions for losses of subsidiary companies.

15. The aggregate amount of the dividends paid and proposed, and stating whether such amounts are subject to deduction of income-tax or not.

16. Effect of any changes in the basis of accounting.

17 A. The profit and loss account shall also contain or give by way of note detailed information showing payments provided or made during the financial year to the directors (including managing director), or manager,

if any, (*a*) by the company, (*b*) the subsidiaries of the company, and (*c*) any other person ;

(*i*) Managerial remuneration, under *Sec. 198 of the Act* paid or payable during the financial year to the directors (including managing director) or managers, if any ;

(*ii*) other allowances and commissions including guarantee comission (details to be given) ;

(*iii*) any other perquisites or benefits in cash or in kind (stating approximate money value where practicable) ;

(*iv*) pensions, etc.,

(*a*) pensions,

(*b*) gratuities,

(*c*) *payment from* provident funds, in excess of own subscription and interest thereon,

(*d*) compensation for loss of office, and

(*e*) *consideration* in connection with retirement from office. [With reference to the words "detailed information" it would be adequate compliance if all aggregate figures are shown under each of the items (*i*) to (*iii*) and under each sub-head of items in (*iv*) whether material or not.]

17 B. The profit and loss account sh
a *note*, a st
with *Sec.*
commission
(including

17 *C.* The profit and loss account shall further contain or give, by way of a note, detailed information as regards to amounts paid to the auditor, whether as fees or otherwise for services rendered—

(*a*) as auditor,

(*b*) as adviser, or in any other capacity, in respect of—

(*i*) taxation matters,

(*ii*) company law matters,

(*iii*) management services, and

(*c*) in any other manner.

17 D. In the case of manufacturing companies, the profit and loss accounts also contain, by way of a note, in respect of each class of goods *manufactured*, detailed quantitative information in regard to the following, namely :

(*a*) the licensed capacity (where licence is in force),

(*b*) the installed capacity, and

(*c*) the actual production

Notes : (1) The licensed capacity and installed capacity of the company as on the last date of the year to which the profit and loss account relates, shall be mentioned against items (*a*) and (*b*) above, respectively.

(2) Against item (c), the actual production in respect of the finished products meant for sale shall be mentioned. In cases where semi-processed products are also sold by the company separate details thereof

3) For the purposes of this paragraph, the items for wh
ny is holding separate industrial licences shall be treated as separate
s of goods but where a company has more than one industrial licence
roduction of the same item at different places or for expansion of the
sed capacity, the item covered by all such licences shall be treated as
class.

17 *E*. The profit and loss account shall also contain by way of
te the following information, namely :

(*a*) Value of imports calculated on C.I.F. basis by the company
uring the financial year in respect of :

(*i*) raw material,

(*ii*) components and spare parts, and

(*iii*) capital goods.

(*b*) Expenditure in foreign currency during the financial year on account of royalty, know-how, professional consultation fees, interest, and other matters.

(*c*) Value of all imported raw materials, spare parts and components consumed during the financial year and the value of all indigenous raw materials, spare parts and components similarly consumed and the percentage of each to the total consumption.

(*d*) The amount remitted during the year in foreign currencies on account of dividends, with a specific mention of the number of non-resident shareholders, the number of shares held by them on which the dividends were due and the year to which the dividends related.

(*e*) Earnings in foreign exchange classified under the following heads, namely :

(*i*) export of goods calculated on F.O.B. basis,

(*ii*) royalty, known-how, professional and consultation fees,

(*iii*) interest and dividends, and

(*iv*) other incomes, indicating the nature thereof.

18. The Central Government may direct that a company shall not
obliged to show the amount set aside to provisions other than those r
ting to depreciation, renewal or diminution in value of assets, i
Central Government is satisfied that that the information should n
disclosed in the public interest and would prejudice the company,
subject to the condition that in any heading stating an amount arri
after taking into account the amount set aside as such, the provision
be so framed or marked as to indicate that fact.

Tutorial Note : In the case of banking companies the pro
relating to bad debts and taxation are not shown in the profit a
account. But as stated above the profit and loss account hints a
the heading interest and discount, that the amount is after mal
provision for bad and doubtful debts and other usual provisions.

19. (1) Except in the case of the first profit and loss acc
before the company after the commencement of the Act, the cor
accounts for the immediately preceding financial year for all ite

in the profit and loss account shall also be given in the profit and loss account.

(2) *The requirement in sub-clause (1) shall in the case of companies* preparing quarterly or half-yearly accounts, relate to the profit and loss account for the period which ended on the corresponding date of the previous year.

Contributions to political parties. Any contribution made to political parties or to an individual for political purposes or to National Defence *Fund should be fully disclosed in the profit and loss account stating* name and the amount. This was also the recommendation of the Shastri Committee.

But, now, as per the Companies (Amendment) Act of 1969, all contributions to political parties or to an individual for political purposes have been prohibited. Contributions to National Defence Fund can be made.

Meaning of "provision", "reserves" and "capital reserves". For the purposes of profit and loss account and balance sheet to be prepared under the Act, unless the context otherwise requires.*

(*a*) the expression "provision" shall, subject to sub-clause (2) of this clause, mean any amount written off or retained by way of providing for depreciation, renewals or diminution in value of assets, or retained by providing for any *known* liability of which the amount *cannot be determined with substantial accuracy*.

(*b*) the expression "reserve" shall not, subject as aforesaid, include any amount written off or retained by way of providing for depreciation, renewals or diminution in value of assets or retained by way of providing for any known liability ;

(*c*) the expression [illegible] ...rount regarded as free for distribu[illegible] and the expression "revenue [illegible] than a capital reserve ;

and in this sub-clause the expression "liability" shall include all liabilities in respect of expenditure contracted for and all disputed or contingent liabilities.

Where—

(*a*) any amount *written off* or retained by way of providing for depreciation, renewals or diminution in value of assets, not being an amount written off in relation to fixed assets before the commencement of this Act ; or

(*b*) any amount retained by way of providing for any known liability :

is in excess of the amount which in the opinion of the directors is reasonably necessary for the purpose, the excess shall be treated for the purposes of this Schedule as a reserve and not as a provision.

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* This interpretation is given in part III of Schedule VI.

...aning of quoted and unquoted investments. ... the expression "quoted investment" means an investment ... which there has been granted a quotation or premission to deal on ... sed stock exchange, and the expression "unquoted investment" ... e construed accordingly.

...Directors' Report. Vide Sec. 217, it has been required that the ...ors shall make out a report and attach the same with every balance ... The report must set out :

(a) The state of affairs of the company ;

(b) The amounts, if any, which the Board proposes to carry to any ...erves in such balance sheet ;

(c) The amount, if any, which the Board recommends should be ...aid by way of dividend ; and

(d) Material changes and commitments, if any, affecting the finan-...cial position of the company which have occurred between the financial year to which the balance sheet relates and the date of the report.

The report of the Board of Directors must deal with any changes which have occurred during the year, with respect to the nature of the business of the company, or the business carried on by them, and generally in the class of business in which the company is interested. Such dis-closure is required if it is material for the appreciation of the state of affairs of the company by its members, and is not, in the opinion of the board of directors, harmful to the business of the company, or the business of its subsidiaries.

Further, under a directive issued by the Reserve Bank of India on 29th October, 1966, the directors' report must deal with the public deposits received by the company and give information about them.

Sec. 217 (2A) of the Act requires that the Board's report shall also include a statement showing the name of employee of the company who, if employed throughout the financial year, was in receipt of remuneration for that year which in the aggregate was not less than Rs. 36,000 or if emplo-yed for a part of the financial year, if he is in receipt of remuneration a... the rate which in the aggregate was not less than Rs. 3,000 per mont... indicating the relationship, if any, of such employee to any director ... manager of the company and such other particulars as may be prescribe...

A per Sec. 217 (3) of the Act it is obligatory for the Board to ... the fullest information and explanations in its report on every reserva... qualification or adverse remark contained in the auditor's report. ... Board's report is usually signed by the company's manager or sec... and at least two directors including the managing director. If so autho... it is sufficient if the chairman puts his signature.

2—SOME WORTH NOTING POINTS AT THE TIME OF PREP... FINAL STATE...

th...

(A) General Points

(1) Although ther... pany does not split its i... account, profit and loss a... The company prepares th...

(2) The profit and loss account is usually divided into two parts—the first part for calculating profit or loss of the company and the second (popularly known as "below the line") for appropriating the profit. But the heading of the account is usually only profit and loss account.

(3) In the case of a company it is essential to show the figures of the previous year on both sides of account.

(4) It is neither essential nor useful to write "To" on the debit side and "By" on the credit side of the profit and loss account.

(5) Profit and loss account shall be so made out as to disclose clearly the true and fair picture of the result of the working of the company during the period covered by the account. This would mean that all expenses and incomes should be disclosed properly ; all material information, e.g., items relating to previous year, change in the accounting [illegible] providing [illegible] ng stock on different basis or drawing on reserves of the previous year—should be either given in the profit and loss account distinctly or be given as a footnote.

(B) Some Adjustments

(1) *Calls in arrear.* This item generally appears in the trial balance. It represents the amount not paid by the shareholders on the calls [illegible] make the paid-up capital as called-up capital and then deducted again.

(2) *Unclaimed dividend.* This always appears on the credit side of trial balance. This represents dividend not collected by the shareholders. It is shown on the liability side of the balance sheet under the heading "current liabilities".

(3) *Interim dividend.* This item always appears in the trial balance and it represents dividend paid by the company before the preparation of [illegible] of profit and is shown on the [illegible] The appro- [illegible] d "profit and [illegible] rm. Calcula- [illegible]

(4) *Final dividend appearing in the trial balance.* Like item (3) it is also shown on the debit side of profit and loss appropriation account. The calculation of final dividend has been given later in the chapter.

(5) *Dividend for the previous year final dividend appearing in the* [illegible] for the previous year [illegible] year [illegible] profit and loss appropriation account.

(6) *Proposed dividend or final or dividend proposed.* This item is generally given under adjustments. This is shown on th[illegible]

and loss appropriation account and on the liability side of bal
under the heading "Provisions."

(7) *Dividend received*. This is an income of the company on the stments made by it in the shares of some other company. This item own on the credit side of the trial balance. When it is shown on the it side of the profit and loss account, it is better to gross up this re because as per the income tax rules the company paying dividend is uired to deduct income tax at source at 24%. (Rate changes from time time.) Thus the company receives 76% of the actual income. In order show it properly the dividend received must be grossed (the formula is : ividend received × 100/76) and then shown on the credit side of profit nd loss account. The amount by which the dividend has been increased s also shown as "Tax deducted at source" on the assets side of the balance sheet.

(8) *Interest received*. This also appears on the credit side of trial balance. The amount of interest is grossed in the same way as suggested for dividend received. Interest received on debentures is grossed in the same way. Interest received on securities other than government securities is grossed at 10%, *i.e.*, 100/90 × Interest received. Interest received on debentures is grossed at 24%, *i.e.*, 100/76 × Interest received.

(9) *Interest paid on money borrowed for construction*. This is a capital expenditure and is capitalised by adding to the cost of asset. So long as this item is not adjusted, it is shown in the balance sheet on the asset side under the heading "miscellaneous expenditure".

(10) *Interest paid on debentures*. If interest is paid on debentures then it is the duty of the company to pay it after deducting income tax on it at maximum rate, *i.e.*, 24%. Thus the amount paid shown in the trial balance is not the gross amount of interest suffered by the company. Actual interest expense is calculated by grossing the figure by applying the formula, *i.e.*, 100/76 × Interest paid. The gross figure is shown on the debit side of profit and loss account and the amount by which this i increased shown on the liability side of the balance sheet under the headin "Tax payable". The journal entry for giving effect to this treatment is :

Debit Interest on debenture account (gross amount)
Credit Sundry debentureholders account (gross amount l tax deducted)
Credit Income tax payable account (tax deducted at sourc

(11) *Discount and cost of issue of debentures*. This includes count, commission and other expenses on the issue of debentures. appears on the assets side of balance sheet under the heading miscellan expenditure. This expense is written off as prudently as possible but case should it be allowed to stand in the books after the life of deben The amount written off is shown on the debit side of profit an account and the unwritten off portion is shown in the balance sheet the heading 'Miscellaneous expenditure'.

(12) *Forfeited shares account*. This appears on the credit trial balance and is shown on the liability side of the balance adding to the paid-up capital under the heading subscribed capital

(13) *Share premium account*. This is shown on the liability side of of the balance sheet under the heading 'Reserves and surplus'.

(14) *Income-tax limit of depreciation*. Sometimes question gives the rates of depreciation for calculating the amount of depreciation on various types of assets as well as the maximum amount of depreciation allowable as per tax rules In this case the profit and loss account as well as the *balance sheet both disclose the depreciation calculated after ignoring the* limit prescribed, as per the income-tax rules. However, the maximum limit put by the income-tax rules is used for calculating the (*i*) **provision for taxation**—the excess amount of depreciation over the prescribed limit is added to the profit as disclosed by the profit and loss account and then on this new profit the provision for tax is calculated ; and (*ii*) managerial remuneration—only depreciation allowable by the income-tax rules is deductable from the profit

For example, if a company has fixed assets Rs. 40,000 ; and profit before depreciation and tax provision Rs. 90,000 ; and tax provision is to ... and income- ... net profit and

	Rs.
Profit before tax and depreciation	90,000
Less Depreciation at 5% p a. on Rs 40,000	2,000
Profit after depreciation but before tax provision	88,000
Less Tax provision at 50% of Rs 88,200	44,100
(*i.e., Rs. 88,000+excess depreciation Rs. 200*)	
Net profit as per profit and loss account.	Rs. 43,900

(15) *Tax adjustments*. In relation to corporate taxation, a student will come across the following items :

(*a*) Tax deducted at source
(*b*) Advance payment of tax
(*c*) Income-tax (corporate tax)
(*d*) Provision for taxation

An explanation of these items and as to how these are to be dealt with in the preparation of final accounts is discussed below

(*a*) *Tax deducted at source* As per Sections 193 and 194 of the ...

		Rs.	Rs.
Bank account	Dr.	770	
Tax deducted at source	Dr	230	
To Dividends received			1,000

Thus the item 'Tax deducted at source' will appear on the debit side of the trial balance. The amount so deducted can later be adjusted towards income-tax payable after the assessment is over.

(*b*) *Advance payment of tax.* Under Section 207 of the Income-tax Act, 1961, assessees are liable to pay advance tax when the income exceeds a certain limit and the limit is Rs. 2,500 for companies. When the tax is so paid the following entry is made :

Debit Advance payment of tax account.

Credit Bank account

This amount also appears on the debit side of a trial balance and is in the nature of a prepaid item. Advance payment of tax can later be adjusted towards income-tax payable after the assessment is over.

(*c*) *Income-tax.* Tax payable on the assessed income is debited to income-tax account. As stated earlier a company adjusts any tax paid in advance or deducted at source towards tax due. For example, *if the tax* payable on assessed income is Rs. 1,00,000 and it has already paid in advance Rs. 60,000, the company now pay Rs. 40,000 only. The entry will be :

		Rs.	Rs.
Income-tax account	Dr.	1,00,000	
To Advance payment of tax			60,000
To Bank			40,000

If the assessment is not completed both 'advance payment of tax' and 'tax deducted at source' remain unadjusted and would appear in the balance sheet under the heading 'Current Assets, Loans and Advances : (B) Loans and Advances'.

(*d*) *Provision for taxation.* Since it would take quite some time for the company to get its income assessed, it is usual to provide some amount for income-tax on profits at current rates of taxation. Such provision is debited to the profit and loss account above the line and credited to 'provision for taxation account' which appears in the balance sheet under the head 'Current Liabilities and Provision—B Provisions'.

Just as provision is made this year, provision would have been made the previous year and such provision called 'old provision' would appear in the trial balance on the credit side. When such a provision exists income-tax paid must be debited to the provision account and not to the profit and loss account. If the old provision is in excess of the income-tax paid, such surplus provision should be shown on the credit side of the profit and loss account below the line. Likewise, if the old provision is not sufficient, further debit is made to the profit and loss account below the line. These adjustments are shown below the line so that current profits may not be affected because of these items.

Illustration 80. From the following trial balance and the adjustment given thereunder show how the items would figure in the relevant accounts.

TRIAL BALANCE

Debits	Rs.	*Credits*	Rs.
Income-tax	65,000	Provision for taxation	68,000

Adjustment Provide Rs. 80,000 by way of provision for taxation.

Solution :

PROVISION FOR TAXATION (OLD)

	Rs.		Rs.
To Income-tax	60,000	By Balance b/d	68,000
To Profit and loss account (below the line)	8,000		
	Rs. 68,000		Rs. 68,000

PROVISION FOR TAXATION (NEW)

	Rs.		Rs.
To Balance c/d	80,000	By Profit and loss account above the line	80,000
	Rs. 80,000		Rs. 80,000
		By Balance b/d	80,000

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Provision for taxation (New)	80,000		
		↑ above the line	
↓ below the line			
		By Provision for taxation (old)	8,000

BALANCE SHEET

as on .....

Liabilities	Rs.	*Assets*	Rs.
Current liabilities and provisions :			
B Provisions			
Provision for taxation	80,000		

Illustration 81. From the following trial balance and the adjustments given thereunder, show how the items would figure in the relevant accounts :

TRIAL BALANCE

Debits	Rs.	*Credits*	Rs.
Advance payment of tax	30,000	Provision for taxation	45,000
Tax deducted at source	5,000		

Adjustments. (1) Income-tax of the previous year has been assessed *at Rs. 50,000 against which the advance payment of tax and tax deducted* at source are to be adjusted. (2) Provide Rs. 60,000 for taxation on current profits.

PROFIT AND LOSS ACCOUNT

	Rs		Rs.
To Provision for taxation (New)	60,000		
		↑ above the line	
		↓ below the line	
To Provision for taxation (Old)	5,000		

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		Rs	Rs.
Income-tax account	Dr.	50,000	
To Advance payment of tax			30,000
To Tax deducted at source			5,000
To Tax payable			15,000

Ledger

PROVISION FOR TAXATION (OLD)

	Rs.		Rs.
		By balance b/d	45,000
To Income-tax	50,000	By Profit and loss account	5,000
	Rs. 50,000		Rs. 50,000

BALANCE SHEET

as on......

Liabilities	Rs.	*Assets*	Rs.
Current liabilities and provisions :			
A. Current liabilities :			
Income-tax payable	15,000		
B. Provisions :			
Provision for taxation	60,000		

Notes : (1) Advance payment of tax remaining unadjusted can also be shown as a deduction from 'Provision for taxation' on the liabilities side.

(2) If the advance payment of tax is more than the actual liabilities, such excess amount paid must appear in the balance sheet till the refund is obtained. When the refund is received bank account is debited and advance payment of tax is credited.

(3) Sometimes 'Advance payment of tax' in the trial balance may relate to more than one year. The amount paid in respect of years for which assessment is not completed should appear in the balance sheet.

3—MANAGERIAL REMUNERATION

The Company Law lays down rigorous restrictions on the managerial remuneration to be provided by a public company or a private company which is a subsidiary of a public company. Following are the details of the restrictions regarding remuneration :

Overall maximum and minimum limits. *Maximum limits.* Under Sec. 198 of the Companies Act the total remuneration payable to all the managerial staff [(*i*) directors including any managing or whole-time director, and (*ii*) manager] in any financial year cannot exceed *eleven* per cent of the net profits of the company for that financial year. The above limit of eleven per cent does not include any fees payable to directors for attending the meetings of the Board or a committee thereof [Sec. 198 (2)]. *Minimum limit* [Sec. 198 (4)]. In case there are no profits or inadequate profits in a particular financial year, the company, with the prior approval of the Central Government, may pay to its all managerial staff (*i.e.*, directors including managing director or whole-time director and managers) by way of minimum remuneration up to Rs. 50,000 per annum (exclusive of directors' fees for attending the meetings of the board or a committee thereof). This minimum limit of Rs. 50,000 may be increased with the approval of the Central Government.

Perquisites to be included in managerial remuneration. The following expenditures incurred by the company are included in the managerial remuneration :

(*a*) expenditure incurred in providing any rent-free accommodation,

any other benefit or amenity in respect of accommodation free of charge ;

(*b*) expenditure incurred in providing any other benefit or amenity free of charge or at a concessional rate ;

(*c*) expenditure incurred in respect of any obligation or service which, but for such expenditure by the company, would have been incurred by them ; and

(*d*) expenditure incurred in effecting any insurance on the life of, or in providing any pension, annuity or gratuity for the managerial staff or his spouse or child.

Under Sec. 200 no company can now pay to any of its officers or employees remuneration free of any tax or varying with any tax payable by him.

Remuneration to directors. Provisions relating to remuneration of directors, including managing director(s) or whole-time director are laid down under Sec. 309. According to this Section the directors, including any managing director or whole-time director, of a public company and a private company which is a subsidiary of a public company will get the remuneration as follows :

(*a*) *Fee* for attending each meeting of the board or a committee thereof. It must not exceed Rs. 250 for each meeting. Any increase in the fee beyond Rs. 250 will be valid only when the approval of the Central Government has been sought.

(*b*) A *whole-time director or a managing director* may be paid remuneration either by way of monthly remuneration or at a specified percentage of the net profits of the company or partly by one way and partly by the other. But except with the approval of Central Government such remuneration shall not exceed :

(*i*) 5% of the net profit for *one* such director,

(*ii*) 10% of the net profits for *all* of them put together, if there are more than one director.

(*c*) In the case of a *part-time director*, who does not receive remuneration by way of a monthly remuneration, the company may, by special resolution, authorise the payment of :

(*i*) a commission of not more than one per cent of the profits of the company if the company *has* managing director(s) or whole-time director ; and

(*ii*) a commission of not more than three per cent of the net profits if the company has *no* manager, or managing director(s) or whole-time director.

These rates of one per cent and three per cent can be *increased by* the company in general meeting with the approval of the Central Government. The special resolution so passed shall remain valid for the period of five years.

(*d*) The net profit for the above purposes be calculated with reference to Secs. 349 and 350 (*without deducting the director's fee from the gross profit.*)

(*e*) A director, who is in receipt of any commission from the company and who is either a managing director or whole-time director, is not entitled to receive any commission or other remuneration from any subsidiary of such company.

(*f*) Under Sec. 310 any increase in the remuneration of any director including managing director or whole-time director of a public company or a private company, which is a subsidiary of a public company, shall not be valid unless it is approved by the Central Government.

Remuneration of manager. Provisions relating to remuneration of a manager are contained in Sec. 387 of the Companies Ant. They are summarised as under :

(*a*) A manager may get his remuneration by way of a monthly payment or by way of a specific percentage of the net profits or partly by way of monthly payment and partly by way of specific percentage of the net profits.

(*b*) Net profit, here also, is calculated with reference to Secs. 349 and 350.

(*c*) The total remuneration cannot exceed five per cent of the net profits except with the approval of the Central Government.

Summary of provisions relating to remuneration of managerial personnel. Managerial personnel include (*i*) board of directors, (*ii*) managing director (s), (*iii*) manager, and (*iv*) whole-time director (s). It is compulsory for every company to have a board of directors but it is left to the choice of the company whether or not to have whole-time director(s) Under Sec. 197 (A), a company cannot have managing director(s) and manager simultaneously. It will have to choose one of the two categories. Thus,

(*a*) Board of directors—every company must have.

(*b*) Managing director(s) or manager—company can have only one of the two categories at a time.

(*c*) Whole time director—company may or may not have. It is left to the choice of the company.

Managing director(*s*). A director who by virtue of an agreement with the company or of a resolution passed by the company in general meeting or by its board of directors or by virtue of its Memorandum or Articles of Association is *entrusted* with substantial powers of management *which would not otherwise be exercisable by him*, and includes a director occupying the position of a managing director, by whatever name called. There can be one or more than one managing directors at a time in a company.

Manager. He is an employee of the company. He, subject to the superintendence, control and direction of the board of directors, has the management of the whole or substantially the whole of the affairs of the company, and includes a director or any other person, occupying the position of a manager, by whatever name called, and whether under a contract of service or not. *A company cannot have more than one manager at a time.*

Whole time director(s). They are also the employees of the company. They do not exercise discretionary powers relating to the management of the company.

The Companies Act, 1956, has laid down certain restrictions on managerical remuneration payable by a public company or a private company which is a subsidiary of a Public company. It may be profitable to note that there are no restrictions on the managerial remuneration payable by a private company which is not a subsidiary of a public company. These provisions (relating to restrictions on managerical remuneration) have been summarised hereunder :

1. [illegible]
tog [illegible]
to [illegible]

2. In case of inadequate profits a company with the approval of Central Government can pay by way of minimum remuneration up to Rs. 50,000 p.a.

3. Maximum limits of remuneration payble to various categories of managerial personnel, when they work in a given combination, have been given in the form of a table as under :

Combinations	*Maximum percentage of annual profits*
(*a*) Board of directors, without managing director (s) or whole-time director(s) or manager	3%
(*b*) Directors with a whole-time director but without manager or managing director(s) Directors (all together) Whole-time director (when there is one)	 1% 5%
(*c*) Directors with whole-time directors] *i.e.*, more than one whole-time director but without manager or managing director(s)] : Directors (all together) Whole-time directors (all together)	 1% 10%
(*d*) Directors with whole-time directors and a manager [It is not possible to have managing director(s)] : Directors Whole-time directors (more than one) (5% in case there is only one whole-time director) Manager	 1% 10% } Maximum 11% 5%
(*e*) Directors with whole-time directors and a managing director (It is not possible to have a manager)	»
(*f*) Directors with whole-time directors and managing directors : Directors Whole time directors Managing directors	 1% 10% } Maximum 11% 10%

) Directors with a managing director (without whole-time directors)	
Directors	1%
Managing director	5%
(h) Directors with managing directors (without whole-time directors)	
Directors	1%
Managing directors	10%

4. These provisions may be restated as under :

(a) All directors when not asisted by whole-time directors, or manager or managing director(s)		3%
(b) All directors when assisted by whole-time director(s) or manager or managing director(s)		1%
(c) Manager	one category at a time is Possible	5%
(d) Managing directors when there is one		5%
(e) Managing directors when there is more than one		10%
(f) Whole-time director when there is one		5%
(g) Whole-time directors when there is more than one		10%
(h) Maximum remuneration to all managerial personnel		11%
(i) Minimum remuneration to all in case of inadaquate profits		Rs. 50,000

Administrative ceilings on managerial remuneration

In addition to the statutory limits discussed above, the Cen Government by virtue of the powers available to it under Sec. 637 AA other provisions of the Companies Act, 1956 has from time to time f administrative ceilings on the remuneration payable to managerial sonnel. The guidelines introduced in 1969 provided for a sala Rs. 90,000 p.a., commission on net profits up to 1 per cent subje maximum of 50 per cent of approved salary and an overall li Rs. 2,23,000. Following the recommendations made by the Bootha Committee and Sachar Committee, the guidelines were revised overall limit was reduced to Rs. 1,32,000 with effect from 9th No 1978.

Again following representations from the business comm the managerial personnel, the ceilings have been revised on 10 1983. The revision takes effect from April 1, 1983. Under th the total emoluments have been increased from Rs. 1,32, 2,02,500 a year, almost in the previous position.

Calculation of net profit for remuneration puposes. The net profit calculated for determining the remuneratio...
from
The
refer

(a) *Add the following to the normal profit* :

Bounties and subsidies received from any Government, or any public authority constituted or authorised in this behalf by any Government, unless and except in so far as the Central Government otherwise directs.

(b) *Do not take credit for the following* :

(i) Premium on shares or debentures of the company which are issued or sold by the company,

(ii) profits on sale of forfeited shares,

(iii) profits of a capital nature including profits from the sale of the undertaking or any of the undertakings of the company or of any part thereof,

(iv) profits from the sale of any immovable property or fixed assets of a capital nature. Unless the business of the company consists, whether wholly or partly, of buying and selling any such property or assets.

Provided that where the amount for which any fixed asset is sold exceeds the written down value thereof referred to in Sec. 350, credit shall be given for so much of the excess as is not higher than the difference between the original cost of that fixed asset and its written-down value.

For example, if a company sells its fixed asset (written-down value of which is Rs. 40,000 and original cost is Rs. 70,000) for :

(i) Rs. 57,000, then credit will be given for Rs 17,000

(ii) Rs. 65,000, then credit will be given for Rs. 25,000

(iii) Rs. 70,000, then credit will be given for Rs. 30,000

(iv) Rs. 75,000, then credit will be given for Rs. 30,000

(v) Rs. 80,000, or any price higher than Rs. 70,000 credit will be given for Rs. 30,000.

(c) *Deduct the following* :

(i) all the usual working charges,

(ii) bonus or commission paid or payable to any member of the company's staff or to any engineer, technician or person employed or engaged by the company, whether on a whole-time or on a part-time basis,

(iii) any tax notified by the Central Government as being in the nature of a tax on excess or abnormal profits,

(*iv*) any tax on business profits imposed for special reasons or in special circumstances and notified by the Central Government in this behalf,

(*v*) interest on debentures issued by the company,

(*vi*) interest on mortgages executed by the company and on loans and advances secured by a charge on its fixed or floating assets,

(*vii*) interest on unsecured loans and advances,

(*viii*) expenses on repairs, whether to immovable or to movable property, provided that repairs are not of a capital nature,

(*ix*) depreciation to the extent specified in Sec. 350.

Sec. 350 allows the following deductions :

(*a*) Normal depreciation (including extra and multiple shifts allowance) calculated on written-down value at the rates specified in the Indian Income Tax Act, 1961.

(*b*) Excess of written-down value over the sale proceeds or scrap value of the asset if it is sold, discarded, demolished or destroyed before the depreciation on such asset has been provided in full.

The Sec. 350 does not permit the following deductions :

(*a*) Special depreciation (*b*) Initial depreciation

(*c*) Development rebate reserve

(*x*) outgoing inclusive of contributions made under Sec. 293 (1) (*e*). Under this Section the board of directors of a public company or a private company which is a subsidiary of a public company shall not, except with the consent of such public company or subsidiary in general meeting, contribute to charitable and other funds not directly related to the business of the company or the welfare of its employees any amounts the aggregate of which will exceed Rs. 50,000 or 5% of its average net profits as determined in accordance *with the provisions of Sec. 349 and 350 during* the three financial years immediately preceding whichever is greater.

(*xi*) the excess of expenditure over income which had arisen in computing the net profits in accordance with this section in any year which begins at or after the commencement of this Act, in so far as such excess has not been deducted in any subsequent year in respect of which the net profits have to be ascertained.

(*xii*) any compensation or damages to be paid by virtue of any legal liability, including a liability arising from a breach of contract,

(*xiii*) any sum paid by way of insurance against the risk of any liability such as is referred to in clause (*xii*),

(*xiv*) debts considered bad and written off or adjusted during the year.

(*d*) *Do not deduct the following* :

(*i*) income tax and super-tax payable by the company under the Indian Income Tax Act, 1961, or any other tax on the income of the company not covered under clauses (*iii*) and (*iv*) of (*c*) above

(ii) any compensation, damages, or payments made voluntarily, that is to say, otherwise than by virtue of a liability such as is referred in *(xii)* of *(c)* above,

(iii) loss of capital nature including loss on sale of the undertaking or any of the undertakings of the company or of any part thereof not including any excess referred to in the proviso to Sec. 350 of the written-down value of any asset which is sold, discarded, dimolished or destroyed over its sale proceeds or its scrap value.

Illustration 82. From the following calculate the maximum commission permissible to directors :

(i) When not assisted by managing director, or manager or whole-time directors :

(ii) When assisted by managing director ;

(iii) When assisted by a manager ;

(iv) When assisted by a whole-time director.

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Bonus paid to a foreign technician	20,000	By Gross profit	36,41,000
To Repairs	5,000	By Profit on sale of building :	80,000
To Interest on debentures	10,000	Cost price Rs. 90,000	
To Donations to the University (1)	75,000	W.D value Rs. 70,000	
To Compensation to an injured man	5,000		
To Provisions for taxation	8,50,000		
To Loss on sale of the vehicle (W.D. value Rs. 11,000)	6,000		
To Net profit	27,50,000		
Rs.	37,21,000	Rs.	37,21,000

Solution :

Statement showing profits for managerial remuneration :

		Rs.
Net profit as per profit and loss account		27,50,000
Less Capital profit on the sale of building :		
Sale price (*i.e.,* Rs. 70,000+Rs. 80,000)	1,50,000	
Less Cost price (original cost)	90,000	
Capital profit		60,000
		26,90,000
Add Provisions for taxation		8,50,000
Net profit for Secs. 198 (1) and 309 (5)		Rs. 35,40,000

(i) *Directors' remuneration when not assisted :*
3% of Rs. 35,40,000

35,400

) *Directors' remuneration when assisted* (2)
1% of Rs. 35,40,000 — 35,400

Notes : 1. Donation to the university is allowed under clause XI of Sec. 349.
2. Directors will get only 1% of the net profits when they are assisted either by managing director, or manager, or whole-time director.

...stration 83. Following is the profit and loss account of *X* Ltd. You ...e required to calculate the maximum remunerations permissible to a ...rt-time director(s). The company does not employ manager or mana...ing director or whole-time director. Also calculate overall maximum ...managerial remuneration under Sec. 198.

	Rs.		Rs.
To Salaries and wages	70,000	By Gross profit	31,10,000
To Directors' fees	40,000	By Profit on sale of building : Cost Rs. 6,00,000 W. D. value Rs. 3,00,000	3,40,000
To Repairs to immovable property	40,000	By Subsidy from the Central Government	60,000
To General expenses	20,000		
To Compensation for breach of contract	10,000		
To Depreciation (including development rebate (Rs. 20,000 and initial depreciation Rs. 10,000)	2,00,000		
To Loss on sale of investments	20,000		
To Scientific research (new laboratory)	2,00,000		
To Donations to charitable institutions	50,000		
To Interest on debentures	40,000		
To Interest on securᵉd loans	10,000		
To Debentures trustee remuneration	10,000		
To Income-tax	10,00,000		
To Proposed dividend	10,00,000		
To Balance c/d	8,00,000		
Rs.	35,10,000	Rs.	35,10,...

Solution :

(*i*) *Calculation of profit* :

Gross profit as per profit and loss account — 31,1...

Add Revenue profit on sale of building :

Sale price (Rs. 3,00,000+Rs. 3,40,000) — 6,40,000
Less Cost price of building — 6,00,000

Capital profit on sale — 40,000

Total profit on sale — 3,40,000
Less Capital profit on sale — 40,000

Revenue profit on sale
Add Subsidy from the Central Government

Less Deductions permissible :

	Rs.	
Salaries and wages	70,000	
Directors' fees	40,000	
Repairs	40,000	
General expenses	20,000	
Compensation for the breach of contract	10,000	
Depreciation (Rs. 2,00,000—Rs. 20,000 —Rs. 10,000)	1,70,000	
Donations to charitable institutions	50,000	
Interest on debentures	40,000	
Interest on unsecured loans	10,000	
Debenture trustee remuneration	10,000	
		4,60,000
Net profit for directors' remuneration		30,10,000
(i) *Part-time directors' commission, 3%* thereof		90,300
(ii) *Maximum overall remuneration*, 11% of Rs. 30,10,000		Rs. 3,31,100

Illustration 84. Following are the relevant balances taken from the books of a company You are required to calculate the remuneration of the managing director at 5% of the profit ascertained according to the Companies Act. Find out the excess amount, if any, paid to him.

	Rs
Net profit	19,794

Items considered for arriving at the above net profit

					Rs.
(i)	Provision for taxation	30,130	(v)	Provision for doubtful debts	600
(ii)	Managing director's remuneration	3,872	(vi)	Depreciation	9,660
(iii)	Preliminary expenses	3,000		Depreciation allowable as per income-tax rules	9,000
			(vii)	Donation to sister concerns	3,000
(iv)	Directors fees	2,000	(viii)	Ex-gratia payment to an employee (without any liability)	1,000

Solution :

Calculation of managing director's remuneration :

		Rs.
Net profit as per profit and loss account		19,794
Add : Provision for taxation	30,130	
Provision for doubtful debts	600	
Managing director's remuneration	3,872	
Preliminary expenses	3,000	
Excess depreciation (Rs. 9,660—Rs. 9,000)	660	
Ex-gratia payment to an employee	1,000	39,262
Profit for the purpose of managerial remuneration		59,056

Commission at 5% thereof		
Commission already paid		
	Rs.	919
Due from the managing director being excess amount paid to him		

Notes : (1) Ex-gratia payment to an employee is not an expense hence added back.

(2) Donations to sister concern is allowed as a deductible expense hence not added back.

ustration 85.† The following is the profit and loss account of Menson td. for the year ended June, 1974. You are required to calculate com- nission now due to managing directors at 5% of the profit. Salary paid s treated as part payment of commission due.

Expenditure	Rs.	Income			
To Stocks at commencement	11,600	By Sales	1,92,034		
To Raw materials	65,880	*Less* : Excise duty	18,423		
To Manufacturing	23,560			1,73,611	
To Personnel (including bonus for the previous year Rs. 1,100 and Employees' State Insurance premium Rs. 225)	15,620	By Stock at close : Manufactured		14,293	
To Administration :		In process		1,452	
Rent, taxes, insurance	920	By Other income :			
Directors fees	220	Rent	1,113		
o Bad debts written off	120	Government securities*	91		
'o Managing directors remunera- tion : Salary	1,800	Trade investments*	24		
Commission	900	Miscellaneous interest*	1,782		
To Research and development expenses	3,120	Profit on sale of fixed assets	878		
To Donations	690	Special rebates, incentives	12,226		
To Contribution to N.D. fund	450	Previous year's un- claimed balances and excess provi- sions written back	382		
To Loss on disposal of :		Miscellaneous	1,461		17,9
Fixed assets	150				
Investments	50				
To Miscellaneous office expenses	1,920				
To Interest on debentures, loans, deposits	1,690				
To Selling and distribution expenses	3,200				
To Depreciation	6,870				
To Development rebate reserve	800				
To Income tax	4,050				
Ta Profit available for app- ropriation	63,703				
Rs.	2,07,313			Rs.	2,(

Information. (*i*) No provision has been made for outstanding lities for bonus to employees in respect of 1973-74 which are liabil accordance with the Payment of Bonus Act. 1965, in view of th practice to charge bonus only in the year of actual payment. Es bonus in respect of 1973—74 is Rs. 1,150.

* Income-tax deducted at source Rs. 67.

† Source : 85th Annual Report of DCM, 1972-73.

(*ii*) Depreciation chargeable under Income-tax Rules is Rs. 6,650.

(*iii*) Written-down value and original cost of fixed assets were Rs. 2,100 and Rs. 2,900 respectively.

Solution :

Calculation of managerial remuneration

Profit as per profit			Rs. 63,703
			6,870
			800
Salary		1,800	
Commission		900	
			2,700
Bonus to employees for 1972-73			1,100
Tax Provision			4,050
Loss on sale of investments			50
			79,273
Less Depreciation charge		6,650	
Profit on sale of fixed assets in excess of original cost :			
Sales price Rs 2,100+878=2,978			
Original cost	2,900		
		78	
Estimated bonus in respect of *1973-74*		1,150	
			7,878
Profit for managerial purpose			71,395
Commission at 5%		Rs.	*3,570*
Remuneration already paid			2,700
Now remaining unpaid		Rs.	870

Commission after charging the commission ... does not provide ... on the profit left ... ted on the profit arrived at before charging any commission or salary (remuneration) to be provided to them That is why in all the preceding illustrations commissions were calculated on the profits at the specified rates without deducting the commissions so arrived at. However, there is ... of ar- ... calcu-

$$\frac{\text{Rate of commission}}{100+\text{Rate of commission}} \times \text{Profit before remuneration}$$

Taking the illustration 84 and the second alternative (rate of commission being the same) the managing director's commission will be Rs. 2,812 (*i.e.*, 5/105 × Rs. 59,056) instead of Rs. 2,953.

Commission payable to more than one member of the managerial st[aff] ...re charging their commissions. When a company employs two or ...re persons to manage the affairs of the company and pays them remu- ...ations in the form of commission at specified rates then, unless other- ...se agreed to specifically, it is not required to charge the commission of one ...ember from the profit of the company for calculating the commission of ...e other member. For example if a company has profits of Rs. 59,056 for managerial remuneration purpose) and if it employs one managing director and one part-time director and pays them commissions at 4% and 1% respectively then their commissions will be :

		Rs.
Managing director, 4% of Rs. 59,056		2,362
Part-time director, 1% of Rs. 59,056		591
Total managerial commission	Rs.	2,953

Commission payable to more than one member of the managerial staff after charging their commissions. As said earlier, there is no restriction on the company to enter into an agreement with its managerial staff to provide them commission on the profit left after charging the commission of (*i*) other members, or (*ii*) other members and his own. If this is an ·greement then calculations are done as explained in the following ·llustration.

Illustration 86. Pagadiwala Containers Limited, having three whole-time directors, on its Board, the others being part-time directors, earned profit during the year ended 31st March, 1977 to the tune of Rs. 2,50,000 aft[er] taking into consideration the following :

	Rs.
Depreciation on fixed assets (Depreciation admissible as per Income-tax rules Rs. 32,800)	47,800
Provision for Income-tax	1,22,500
Capital expenditure included in general expenses charged to profit and loss account.	12,500

Calculate the maximum remuneration payable to the whol[e-time] directors assuming that the remuneration payable to the who[le-time] directors to be calculated on net profits remaining after payment o[f com]mission to part-time directors and the commission to part-time d[irectors] is to be calculated on net profits remaining after payment of remu[neration] to whole-time directors. [*A.C.S. Final Ju*...

Solution :

(*i*)	*Profits as per profit and loss account*	Rs. 2,50,...
	Add	
	Excess depreciation (47,800—32,800)	15...
	Provision for taxation	1,2...
	Capital expenditure charged	1...
	Net profit for calculating managerial remuneration.	4,0...

(ii) *Calculation of remuneration* :

Maximum remuneration payable to whole time director=10% of the net profits after charging commission to part-time directors. Maximum remuneration payable to part-time directors=1% of the net profits after charging commission to whole-time directors. Let the remuneration to whole-time directors be x and the remuneration to part-time directors be y,

$$\therefore \quad x = 10\% \text{ of } (\text{Rs. } 4{,}00{,}000 - y)$$

$$10\,x = 4{,}00{,}000 - y$$

or $\quad 10\,x + y = 4{,}00{,}000, \qquad \ldots(1)$

Likewise $y = 1\%$ of Rs. $(4{,}00{,}000 - x)$

$$100\,y = 4{,}00{,}000 - x$$

or $\quad 100\,y + x = 4{,}00{,}000 \qquad \ldots(2)$

The above two equations to be solved simultaneously as follows :

$$10\,x + y = 4{,}00{,}000 \times 1$$

$$x + 100y = 4{,}00{,}000 \times 10$$

Multiplying equation (2) by 10 we obtain

$$10\,x + \quad y = 4{,}00{,}000 \qquad \ldots(3)$$

$$10\,x + 1{,}000y = 40{,}00{,}000 \qquad \ldots(4)$$

(Substracting (4) from (3))

$$999\,y = 36{,}00{,}000$$

or $\quad y = \dfrac{36{,}00{,}000}{999} = \text{Rs. } 3{,}604 \text{ (approx)}$

Substituting the value of y in equation (1) we obtain

$$10\,x + 3{,}604 = 4{,}00{,}000$$

or $\quad 10\,x = 4{,}00{,}000 - 3{,}604$

$$x = \text{Rs. } 39{,}640 \text{ (approx.)}$$

∴ Remuneration to whole-time directors	Rs.	39,640
and Remuneration to part-time directors		3,604
Total managerial remuneration		43,244

Illustration 87. NOCIL Ltd. employs a manager [illegible] time directors. It pays 5% commission to the manager [illegible] whole-time director. The commission payable [illegible] culated on the profit left after charging his commission [illegible] of whole-time directors, and commissions payable [illegible] are calculated on profits left after charging the [illegible] Companies Act after taking into consideration the [illegible]

† When there is a manager it is not possible to [illegible]

	Rs.		Rs.
To Administrative and selling expenses	70,400	By Gross profit	3,00,000
To Staff salaries and bonus	30,000	By Subsidy from the State Government	40,000
To Development rebate reserve	8,000	By Profit on sale of plant—Cost Rs. 1,20,000 realised Rs. 1,40,000)	30,000
To Income tax	6,000		
To Tax on abnormal profits	1,000		
To Managerial remuneration	15,000		
To Depreciation provision	50,000		
To Profit available for appropriation	1,89,600		
Rs.	3,70,000	Rs.	3,70,000

Note : Administration and selling expenses included the cost of construction of a new showroom Rs. 10,000; staff salaries and bonus included bonus paid to staff on account of last year services Rs. 2,300—bonus estimated for this year Rs. 2,400 has not been brought into account. Depreciation included initial depreciation Rs. 1,500.

Solution :

(*i*) *Calculation of profit for managerial remuneration purpose* :

		Rs.
Gross profit as per profit and loss account		3,00,000
Add Subsidy from the State Government		40,000
Profit on sale of plant—other than capital profit, *i.e.*, Rs. 30,000−(Rs. 1,40,000−Rs. 1,20,000)		10,000
		3,50,000
Less Administration and selling expenses other than cost of construction of a new showroom. (Rs. 70,400−Rs. 10,000)	60,400	
Staff salaries and bonus other than paid for the previous year (Rs. 30,000−Rs. 2,300)	27,700	
Bonus outstanding for the current year	2,400	
Tax on abnormal profits	1,000	
Depreciation provision other than initial depreciation (Rs. 50,000−Rs. 1,500)	48,500	
		1,40,000
Profit for managerial remuneration	Rs.	2,10,000

(*ii*) *Calculation of commission* :

Let Manager's commission be x and those of whole-time directors be y.

Now, Profit before giving any commission	2,10,000
Profit after manager's commission	$2{,}10{,}000-x$
Profit after whole-time directors commission	$2{,}10{,}000-y$

Since manager gets 5% of the profit left after charging his and whole-time directors commission, his commission is 5/105 (Rs. 2,10,000 − y). Since his commission has been assumed as x, we get the following equation :

$$x = \frac{5}{105}\,(\text{Rs. } 2{,}10{,}000 - y) \qquad \text{...(I)}$$

Similarly equation for the commission for whole-time directors can be framed. In this case it is :

$$y = \frac{6}{116}\,(\text{Rs. } 2{,}10{,}000 - x) \qquad \text{(II)}$$

Now the two equations can be solved and values of x and y can be ascertained. The values are : x = Rs. 9,459, and y = Rs. 11,351. Thus, the manager gets Rs 9,459 and all the three whole-time directors get Rs. 11,351, *i.e.*, Rs. 3,784 (approx.) each. Total commission payable to all the managerial staff is Rs. 20,810 (*i.e.*, Rs. 9,459 + Rs. 11,351) which is less than the maximum of 11% of the profit, *i.e.*, 11/100 × Rs. 2,10,000 = Rs. 23,100.

4—DIVISIBLE PROFITS AND DIVIDENDS

(A) DIVISIBLE PROFITS

General view. Profits available to shareholders for dividend are called divisible profits. In normal course, profits are distributed as dividends only when they are left after meeting all expenses, losses, depreciation on fixed assets, fall in the price of current assets, taxation, past losses, and transferring a reasonable amount to reserves. The profits available for dividend should not include profit arising out of revaluation of fixed assets and other profit of extraordinary nature (capital profits). No dividend can be declared in the absence of profits.

Legal position. Sec. 205 of the Companies Act lays down certain conditions on the ascertainment of divisible profits. The provisions are summarised below :

(*i*) *Dividend out of current years' profits.* Dividend out of the profits of current year can be declared only *after* providing for depreciation in accordance with the provisions of Sec. 205 (2) or

(*ii*) *Dividend out of previous years or years' profits.* Dividend out of the profits of any previous financial year or years which falls or fall after the commencement of the Companies (Amendment) Act, 1960 can be declared only after providing for such depreciation out of the profits of that financial year or out of the profits of any other previous year or years

(*iii*) *Dividend out of aggregate profits.* Dividend can be [illegible] out of the aggregate of profits mentioned in (*i*) and (*ii*) above [illegible]

(*iv*) *Dividend out of subsidy.* Dividend can be declared [illegible] provided by the Central Government or a State Government [illegible] ment of dividend in pursuance of a guarantee given by the [illegible]

In order to understand complete provisions of the [illegible] sary to discuss the following points :

(*a*) Calculation of depreciation in accordance with the provisions of Sec. 205 (2) ;

(*b*) Question of arrears of depreciation : and

(c) Question of past losses.

(*a*) *Calculation of depreciation*. For the purpose of Sec. 205 (*i*), depreciation shall be provided either—

(*i*) to the extent specified in Sec. 350 ; or (see page 4·234)

(*ii*) in respect of each item of depreciable assets, for such an amount as is arrived at by dividing 95 per cent of the original costs thereof to the company by the specified period in respect of such asset. (Specified period in respect of any depreciable asset shall mean the number of years at the end of which at least 95 per cent of the original cost of that asset to the company will have been provided for by way of depreciation if depreciation were to be calculated in accordance with the provisions of Sec. 350) ; or

(*iii*) On any other basis approved by the Central Government which has the effect of writing off by way of depreciation 95 per cent of the original cost to the company of each such depreciable asset on the expiry of the specified period (meaning of specified period given above) ; or

(*iv*) as regards any other depreciable assets for which no rate of depreciation has been laid down by the Indian Income-tax Act, 1961, or rules made thereunder, or such basis as may be approved by the Central Government by any general order published in the Official Gazette or by any special order in any particular case :

Provided that where depreciation is provided for in the manner laid down in clause (*ii*) or clause (*iii*), then, in the event of the depreciable asset being sold, discarded, demolished or destroyed the written down value thereof at the end of the financial year in which the asset is sold, discarded, demolished or destroyed, shall be written off in accordance with the proviso to section 350.

(*b*) *Arrears of depreciation*. In this connection it is important to note the date of 28th December, 1960.

It is not necessary for a company to provide for depreciation where a dividend for any financial year is declared out of the profits of any *previous* financial year or years falling *before* 28th December, 1960. Hence the profits of the financial years ending before 28th December, 1960 are available for distribution without making good the arrears of depreciation.

It is positively necessary for a company to provide for depreciation for any previous financial year or years falling *after* 28th December, 1960 if a company wants to use the profits of that financial year or of any other previous financial year or years. Thus, in respect of the years falling *after* 28th December, 1960, all arrears of depreciation are required to be made good before declaring a dividend.

In short, in regard to arrears of depreciation the following three rules may be stated :

(*i*) In respect of the *current* financial year the prescribed depreciation must be provided ;

(*ii*) In respect of financial years falling *before* 28th December, 1960 the arrears of depreciation are not required to be made good for declaring dividend out of the profits of such previous years ;

(*iii*) In respect of financial years falling *after* 28th December, 1960, the arrears of depreciation computed in the prescribed manner must be made good before declaring dividend out of the profits of those financial years.

(*c*) *Past losses.* If a company incurs a loss in any financial year falling *after* 28th December, 1960 then :

(*i*) the amount of loss, OR

(*ii*) an amount which is equal to the amount provided for depreciation for that year or those years.

Whichever is less, must be set off against :

(*a*) the profits of the company, after providing for the prescribed depreciation for the year for which dividend is proposed to be declared ; or

(*b*) the profits of the company for any *previous* financial year or years arrived at after providing for the prescribed depreciation ; or

(*c*) the aggregate of (*a*) and (*b*) together.

Illustration 88. Calculate the amount of divisible profit in the 3rd year from the information given below :

	Profit of the years falling after 28th December, 1960		
	1st year Rs. (lakhs)	2nd year Rs. (lakhs)	3rd year Rs. (lakhs)
I. Profit or loss before depreciation	(−) 30	(−) 15	(+) 75
II. Depreciation provided in the books	3	3	9
III. Depreciation as prescribed under Sec. 205	24	21	18

Solution :

(*i*) Arrears of depreciation must be provided. In this case arrears are Rs. 48 (*i.e.*, Rs. 24+Rs. 21+Rs. 18−Rs. 3−Rs. 3−Rs. 9).

(*ii*) (*a*) Past losses. Rs. 33 (*i.e.*, Rs. 30+3)+Rs. 18 (*i.e.*, Rs. 15+3) =Rs 51

(*b*) Amount of depreciation already provided during the year of losses, *i.e.*, Rs. 3+Rs. 3. =Rs 6

Whichever is less Rs. 6

Calculation of divisible profits :

	Rs.
Profits of the current year after depreciation as per books (*i.e.*, Rs. 75−Rs. 9)	66
Less Arrears of depreciation	48

Less Arrears of loss or an amount equal to depreciation provided during the years of losses whichever is less	6
Divisible profits :	Rs 12

Alternative method :

It may be noted that divisible profits can be ascertained in the following manner :

	Rs.
Profits in the current year before depreciation	75
Less Depreciation as per prescribed rules for all the years, *i.e.*, Rs. 24+Rs. 21+Rs. 18	63
Divisible profits	Rs. 12

Thus it may be concluded that it is not necessary that loss before depreciation in respect of previous years falling after 28th December, 1960 should be set off to arrive at the divisible profits. In respect of such years, the requirement is that all arrears of depreciation calculated in the prescribed manner must be made good.

Other provisions relating to divisible profits

(*i*) **Dividend must be paid in cash.** No dividend shall be payable except in cash. Provided that nothing in this sub-section shall be deemed to prohibit the capitalisation of profits or reserves of a company for the purpose of issuing fully paid-up bonus shares or paying up any amount for the time being unpaid on any shares held by the members of the company. The details of bonus shares have been given later in the chapter.

Any dividend payable in cash may be paid by cheque or warrant sent through the post directed to the registered address of the shareholder entitled to the payment of the dividend, or in the case of joint shareholders, to the registered address of that one of the joint shareholders which is first named on the register of members, or to such person and to such address as the shareholder or joint shareholders may in writing direct.

(*ii*) **Interest out of capital.** Dividend is payable, as said earlier, only out of profits. In other words, dividend cannot be paid out of capital. But in certain circumstances payment of interest out of capital is allowed. This has been given in Sec. 208. In the case of a company which issues shares for the purpose of raising money to defray the expenses of the construction of any work or building or the provision of any plant, which cannot be made profitable for a lengthy period, the Central Government may permit the payment of interest on so much of that share capital as is for the time being paid up, for the period and charge the sum so paid by way of interest, to capital as part of the cost of construction of the work or building, or the provision of the plant. The payment of interest must not be prohibited by the Articles and the rate of interest must not exceed 4% (unless otherwise permitted by the Central Government).

(*iii*) **Capital profits.** No dividend can be paid out of capital profits unless (*i*) they are realised in cash, (*ii*) *surplus remains after revaluation of all assets* ; and (*iii*) articles do not prohibit the payment of dividend out of

capital profits. The following types of capital profits are not at all available for dividend :

(a) Share premium account ;

(b) Profit remaining after the re-issue of forfeited shares , and

(c) Capital redemption reserve account (credited on the redemption of redeemable preference shares out of divisible profits)

The following types of capital profits are also normally not available for dividend :

(a) Profit prior to incorporation ;
(b) Profit on the redemption of debentures ;
(c) Premium on the issue of debentures ;
(d) Profit on the acquisition of building ;
(e) Profit on sale of fixed assets.

[illegible] Restrictions on Dividends) [illegible]

(a) issue of bonus shares ,
(b) writing off fictitious assets such as preliminary expenses etc. ,

(c) providing for premium payable on redemption of preference shares or debentures ; and

(d) writing off losses on revaluation of the assets of the company.

It may be very carefully noted that *if capital profits are transferred to capital reserve then it ceases to be available for dividend* If capital profits are to be used for dividend then they must not be transferred to capital reserve. Capital profits, however, can be used :

(a) For paying fully paid-up bonus shares, and

(b) For writing off fictitious assets like discount on issue of debentures and shares, preliminary expenses, underwriting commission and goodwill.

(iv) Profits of subsidiary companies. They must not be included in the divisible profits unless the subsidiary company has actually declared the dividend. It is not necessary to provide for the losses of subsidiary companies but in pursuance to a policy of conservatism it is better to provide for such losses.

[illegible] of fixed assets. In general it is not [illegible] increasing the [illegible] cision on this [illegible] extent then there is no [illegible] be written back [illegible]

(vi) Preliminary and other expenses of deferred revenue nature. It is not necessary to write off expenses like preliminary expenses, underwriting commission, discount on the issue of shares and debentures for determining the amount of divisible profits.

(B) LEGAL REQUIREMENTS REGARDING APPROPRIATION OF PROFITS BY THE COMPANY

Generally the articles of the company provide rules regarding the disposal of profits. Usually articles empower the board to decide the amounts to be set aside towards various reserves, sinking funds, etc., and also the quantum of dividend. However, in recent years the legislative changes are tending to restrict this discretion, because of the failure on the part of a few in observing financial discipline in the matter of declaring dividends. A study of the legal requirements regarding the disposition of profits is necessary, as it is obligatory for the boards to follow these as well as the requirements stated in the article.

(1) TRANSFER OF PROFITS TO RESERVES

Section 205 (2A) imposes two restrictions on the declaration of dividend from out of the current profits, namely ;

(*a*) Profits must be arrived at after providing for depreciation for the financial year as well as for arrears of depreciation for previous financial year or years, if any, in accordance with the provisions of Section 205 (2) ; and

(*b*) Transfer such percentage of the profits for the year to reserves not exceeding 10% as may be prescribed.

The Central Government has prescribed the following percentage by framing the Companies (Transfer of profits to reserves) Rules 1975. The percentages are linked to the rates of dividend proposed by the directors.

Proposed dividend	*Percentage of profits to be transferred to reserve*
(*a*) Exceeding 10% but not more than 12½% of the paid-up capital	2½%
(*b*) Exceeding 12½% but not more than 15% of the paid-up capital	5%
(*c*) Exceeding 15% but not more than 20% of the paid-up capital	7½%
(*d*) Exceeding 20% of the paid-up capital	10%

Note : Where the proposed dividend does not exceed 10%, it is not obligatory on the company to transfer any profits to its reserves. The directors, however, can exercise their discretion, and transfer some amount to reserves from out of profits. But such transfer should not exceed the ceiling of 10% prescribed in the Act referred to above.

Transfer of higher percentage : Although there is a ceiling of 10%, a company may make a voluntary transfer of higher percentage of its profits to the reserves in accordance with the rules made by Central Government for this purpose. The Central Government has framed the following rules in this regard.

(*a*) Where a dividend is declared, the minimum distribution of dividend equal to the average rate of the rates for the three preceding years is ensured.

(*b*) Where bonus shares have been issued in the financial year in which the dividend is declared or in the three years immediately preceding the financial year, a minimum distribution of dividend equal to the average

amount (quantum and not the rate) of the dividend declared for the three years is ensured.

However, the minimum distribution in the above two cases need not be ensured if net profits after tax have fallen by at least 20% of the average net profits after tax of two preceding financial years.

(c) Where no dividend is declared the amount proposed to be transferred to its reserves from the current profits must be less than the average amount of dividends to the shareholders declared by it over three preceding financial years.

(2) DECLARATION OF DIVIDEND FROM OUT OF ACCUMULATED RESERVES

It has been the practice of most of the companies to create a "Divi- [illegible]

dends during lean and difficult years. After the Companies (Amendment) Act, 1974, there are now restrictions on the utilisation of such reserves. According to Section 205 A (3) a company can declare dividend from out [illegible]

following conditions are to be satisfied :

(a) The rate of dividend must be 10% or the average of the rates of the five preceding years, whichever is less.

(b) The amount drawn from such reserves should not exceed an amount equal to one-tenth of the sum of its paid-up capital and free reserves. The amount so drawn must first be utilised to set off the losses incurred in the financial year and only the balance can be utilised for the declaration of dividend.

(c) The balance of reserves after such draw shall not fall below 15% of its paid-up share capital.

For the purpose of this rule "profits earned by a company in previous years and transferred by it to the reserves" mean the total amount of net [illegible]

out of accumulated profits transferred to the reserves only. Therefore, a company *need not satisfy the conditions stated above, for declaring dividends* from out of profits carried forward in the profit and loss account without being transferred to reserves. However, there is no basis for such discrimination and the omission in the Act seems to be accidental.

(2) In view of the provision of Sec. 205 (2A) doubts have been [illegible] paid without preparing [illegible] and transferring the [illegible] many companies having

...od accounting system, it is not difficult to ascertain the profits position at any given time. In fact many of the companies are in a position to forecast the profit at the beginning of the year itself, because of the technique of budgeting. Regarding transfer of profits to reserves, the need arises only if the interim dividend proposed exceeds 10%. Even if the dividend proposed exceeds 10%, company can allocate the profits to reserves and go ahead with the declaration of dividend. However to be on the safe side, the company may allocate to the reserves a larger amount than is necessary, so as to avoid the contravention of this section. Moreover as interim dividend is only a *pro-tem* dividend, strict compliance of all the provisions can be taken care of at the time of declaring the final dividend.

Illustration 89. Calculate the maximum amount that can be distributed as dividend for the year 1978, keeping in mind Companies (Declaration of dividend out of reserves) Rules, 1975 and the data given below :

	Rs.
Paid-up equity capital	10 lacs
Free reserves	4 lacs
Loss for the year 1978	·5 lacs
Dividends declared for 1973, 1974, 1975, 1976 and 1977	10%, 8%, 6%, 6%, 10...

Solution. (1) According to the first condition

Average rate of the preceding 5 years $= \frac{10+8+6+6+10}{5}$

$= 8\%$.

Since this is less than 10%, as per this condition only a divide... 8% can be declared.

8% on 10 lacs works out to Rs. 80,000

(2) According to the 2nd condition

Amount to be drawn from reserves 1/10th of paid capital + free reserves *i.e.*, 1/10th of (10 lacs + 4 lacs) ... R...

Less current losses to be set-off

Amount that can be distributed as dividend

(3) According to the 3rd condition

$$Q = FR - \frac{3}{20}C^*$$

Q = Quantum of dividend

where

Where

*FR = Free reserves

C = Paid-up capital

Q = Quantum of dividend.

According to the 3rd condition

$FR - Q = 15\%$ of C or $FR - Q = 3/20\ C$

$\therefore\ Q = FR - 3/20\ C$

FR = Free reserve

C = Paid-up capital

Substituting the figures

$$Q = 4 \text{ lacs} - \frac{3}{20} \times 10 \text{ lacs}$$

$$= 2{\cdot}5 \text{ lacs.}$$

Since all the conditions are to be satisfied, only the least of the three amounts can be distributed as dividend, *viz.*, Rs. 80,000.

(C) DIVIDENDS

[illegible] and articles of association of the company concerned.

[illegible] sue at law for recovery of the same. Note, however, that when a company goes into liquidation, a declared dividend, though remaining due as an arrear or debt does not rank with other debts due to creditors, but is only taken into account for adjustment of the rights of shareholders as contributories. Dividend must be paid within 42 days of declaration. Dividend is paid only to a registered shareholder or on his order to his banker. In case shares are converted into warrants, the bearer of the warrant is entitled to dividend. From the accounting point of view the following points [illegible]

[illegible] instructions in [illegible] on the *paid-up* [illegible] 20,000 shares [illegible] is Rs. 8,000. If the articles specifically allow then dividend can be declared on the *nominal* value of shares. In the second alternative dividend in the above case is Rs. 10,000.

(*b*) **Calls-in-advance.** No dividend is paid on calls in advance.

(*c*) **Calls-in-arrear.** If there are calls in arrear then dividend is paid on the amount actually paid by shareholders. The company is, however, authorised to make provision in the articles prohibiting the payment of dividend on shares having calls in arrear.

(*d*) **Period.** The dividends are calculated proportionately after taking into consideration the date of issue of shares. For example, if a company has issued 2,00,000 shares of Rs 10 each on January 1, and 3,00,000 shares of Rs. 5 each on 1st July and it declares a 10% dividend on 31st December then the dividend will be :

		Rs
on 2,00,000 shares for 1 year		2,00,000
on 3,00,000 shares for 6 months		75,000
Total dividend	Rs.	2,75,000

There is, however, nothing to prohibit the company to issue shares on terms providing that it shall rank for dividend as from a particular date.

(e) **Tax.** The company is required to deduct income-tax at source on all dividends declared by it, unless they are declared free of income-tax. The rate at which the tax is deducted depends on the status of the assessee. The rates prevailing at present are given below :

Status of the shareholders	*Income tax* %	*Surcharge* %	*Total tax* %
(1) Resident individual	20	4	24
(2) Domestic company	22·5	1·5	24
(3) Non-resident individual	30	6	36
(4) Non-domestic company	25	Nil	25

No tax is deducted from the dividends due to shareholders producing exemption certificates. Such certificates are issued by income-tax officers on being satisfied that the income of the shareholder including dividend income is less than the minimum liable to income-tax. Tax is also not deducted on shares covered by statements furnished by the shareholders under Section 194 of the Income-tax Act, 1961 and duly registered with the company.

Tax deducted by the company is deposited by it with the Government. The company gives a certificate to the shareholder mentioning the tax deducted at source and the shareholder is entitled to get the refund of this tax from the Government. Thus if a company declares a dividend of Rs. 1,00,000 then actually it pays to shareholders Rs. 77,000 and deposits with the Government Rs. 23,000 (23% of Rs. 1,00,000). Profit and loss appropriation account is debited with the gross amount of dividend (not the amount actually paid to shareholders). Thus in some questions when it is mentioned that so much dividend is paid, students are required to find the gross value of dividend for showing it in the appropriation account. The difference between the gross value of dividend and the amount actually paid is shown on the liability side of the balance sheet as tax payable.

(f) **Interim dividend.** An interim dividend is a dividend paid by the directors at any time between two annual general meetings. Where the articles authorise, the directors can resolve to pay interim dividend. But a mere resolution of the directors does not create a debt enforceable against the company for it is always open to directors to rescind the resolution before payment of dividend. No interim dividend can be declared or paid unless depreciation for the full year (not proportionately for any fraction of a year but for the whole year) has already been provided. This provision is not relaxable, however good the profits position at the time of declaring or paying the interim dividend may be. If it is found that interim dividend has been paid without sufficient profits then it amounts to payment of dividend out of capital and directors are liable to make good the amount.

The interim dividend is usually paid for six months. Its calculation depends upon the langunge of the rate of dividend. If a company has

4,00,000 shares of Rs. 10 each, Rs. 8 paid-up and pays interim dividend at 6% p.a. then dividend is calculated after considering the period of six months, *i.e.*, in th
dend is 6% (p.a.
out considering the period, *i.e.*, in this case the dividend is Rs. 1,92,000. In other words, the effective rate of interim dividend in the second case is 12% p.a.

(*g*) **Final dividend.** After having declared interim dividend the directors may recommend another dividend. This dividend is termed as final dividend. When a final dividend is declared then interim dividend is not adjusted unless the resolution mentions it specifically. Thus if a company has 4,00,00
interim dividend of
dend is Rs. 2,88,000
Rs. 1,92,000).

(*h*) **Scrip dividend.** Before the p of Companies (Amendment) Act., 1960, many companies used to
or debentures of other companies.
scrip-dividend. Often a shareholder
dend in the form of shares or debentures of other companies was worthless as directors would use only such investments which they found were not good. In order to avoid such unhealthy practice, the payment of scrip-dividend is stopped after 1960.

(*i*) **Preference share divid** Preference share dividend is always paid prior to any payment of
ference shareholders can clain
interest on debentures, it cann Preference share dividend, unless stated non-cumulative, is always cumulative and if for reasons of inadequate profits it has not been paid for some years, the whole of the dividend (including the arrears of past years) is to be paid first to preference shareholders before declaring any dividend to equity shareholders. It may be noted that preference shareholders cannot force the company to pay all dividends (including arrears); what they can do is to force the company to pay them before any payment is made to equity shareholders. Thus, if equity shareholders are not paid any dividend, preference shareholders also cannot make any claim. So
mains unpaid, it appears

(*j*) **Balance of unpaid dividend account.**

As per Sec. 205 A of the Act, newly introduced, if a dividend has been declared by a company but has not been paid within 42 days from the date of declaration to any shareholder entitled to the payment of dividend, the company shall, within seven days, transfer the total amount of dividend which remains unpaid within the said period of 42 days to a special account
in that behalf

such transfer any claims by the shareholders will be account. If the amount remains unpaid or unc

years, the same must be transferred by the company to General Revenue Account of the Central Government. After such transfer, any person wishing to claim the amount must make an application to the Central Government for payment of money claimed. The Central Government after it is satisfied on the production of a certificate from the company or otherwise and after obtaining indemnity from him, make order for the payment of whole or any part of the money claimed. For this purpose the Central Government has framed "The Companies unpaid Dividend (Transfer to General Revenue Account of the Central Government) Rules, 1978.

Preference shareholders although enjoy priority in the payment of dividend, are entitled to only fixed rates of dividend. Because of this during good years equity shareholders enjoy large dividends. But sometimes companies issue what are known as participating preference shares with a right to participate in the balance of profits (after the payment of fixed dividend) along with the equity shareholders, according to the terms of issue of such shares. For example 8% Preference shares may be issued with a further right to 50% of the excess dividend over 16% paid to equity shareholders. If the company declares 20% dividend to equity shareholders, then preference shareholders will get their usual 8% plus 2% being 50% of the equity dividend in excess of 16%.

Accounting treatment

1. *On recommending dividend to shareholders* :

Debit Profit and loss appropriation account
Credit Proposed dividend account

In case there is no sufficient balance in the profit and loss appropriation account, directors can use the balance lying in dividend equalisation reserve or general reserve. If these accounts are used then before making the above entry for dividend, it is required that the necessary amount be transferred from these reserves to profit and loss appropriation account. Entry will be :

Debit Dividend equalisation reserve or/and
Debit General reserve
Credit Profit and loss appropriation account

2. *On declaring the dividend* :

Debit Proposed dividend account (with gross amount)
Credit Dividend payable account (with the actual amount to be paid)
Credit Income-tax account (with income-tax deducted at source)

3. *On setting aside the amount for paying dividend* :

Debit Dividend bank account
Credit Bank account

The amount set aside is only for net dividend and not for tax.

4. *On paying dividend* :

Debit Dividend payable account

Credit Dividend bank account

5. *On payment of tax*

Debit Income-tax account

Credit Bank account

Since unpaid dividend has to be transferred to a special account as per Sec. 205 A of the Companies Act it is preferabl ...
bank accou ...
transfer of ...
three years ...

Debit Dividend payable account

Credit Dividend bank account

Illustration 90

A company carried forward balance of Rs. 30,000 in the profit and loss account from the year ended 31st March, 1973. During the year 1974 it made a further profit of Rs. 3,00,000. It was decided that following decision be carried out—

(*a*) Provision for taxation Rs. 1,50,000, (*b*) dividend equalisation account Rs. 20,000 (*c*) dividend on 8% (tax free) preference shares of Rs. 2,00,000, (*d*) dividend at 15% on 30,000 equity shares of Rs. 10 each fully paid, (*e*) general reserve Rs. 35,000, (*f*) development rebate reserve Rs. 35,000.

You are required to give profit and loss appropriation account and give journal entries for payment of dividend. Tax deducted at source is 23%.

Solution :

PROFIT AND LOSS APPROPRIATION ACCOUNT
For the year ended 31st March, 1974

	Rs.		Rs.
To Provision for taxation	1,50 000	By Balance b/d	30 000
To Dividend equalisation account	20,000	Profit made during the year	3,00,000
To General reserve	35,000		
To Development rebate reserve	35,000		
To Proposed equity dividend	45,000		
To Proposed preference dividend	20,780		
To Balance c/d	24,220		
Rs.	3,30,000	Rs.	3,30,000

JOURNAL ENTRIES

		Rs.	Rs.
Proposed equity dividend account	Dr	45,000	
Proposed preference dividend account	Dr.	20,780	
To Equity dividend account			45,000
To Preference dividend account (1)			20,780

Equity dividend account	Dr.	10,350	
Preference dividend account	Dr.	4,780	
To Income tax account			15,130
Income-tax account	Dr.	15,130	
To Bank account			15,130
Dividend bank account	Dr.	50,650	
To Bank account			50,650
Preference dividend account	Dr.	34,650	
Equity dividend account	Dr.	16,000	
To Dividend bank account			50,650

Tutorial Notes

(1) **Under Sec. 194** of the Income-tax Act no dividend can be paid without **deducting tax.** In order to make it free of tax it has been grossed up at 23%, *i.e.*, $\frac{100}{77} \times$ 16,000=Rs. 20,772 or Rs. 20,780

5—BONUS SHARES

Cash Bonus. The term cash bonus stands for extra dividend paid by the company. Cash bonus is paid by the company when it has large accumulated profits as well as cash to pay dividend. Before making any cash payment, directors should make sure that it will not affect adversely their working capital requirements and future plans of capitalisation. In the event of accumulated profits and cash resources, directors resort to the policy of declaring cash bonus instead of increasing the rate of dividend, because in case the rate of dividend is increased then it becomes almost obligatory for the directors to maintain that increased rate of dividend even in the future (which directors may not be able to keep up.) Cash bonus, inherently, implies that it may not be repeated in the future. Entries for cash bonus are the same as done for dividend.

Bonus Shares. Bonus shares are issued by a company when it wants to pay dividend by issuing shares. Bonus shares are declared when company has sufficient profit to declare dividend but either does not possess cash to pay it or does not want to part with it in order to materialise some capital expenditure plans. Thus bonus shares result in the capitalisation of profit of the company.

Advantages of the issue of Bonus Shares :

These can be discussed from two angles, namely (1) from the viewpoint of the company and (2) from the viewpoint of shareholders.

(1) From the viewpoint of the company :

(*a*) Since there is no cash outgoing, liquidity of the company is not impaired.

(*b*) The capital as per balance sheet will be more realistic than it would be otherwise.

(*c*) Profits remaining the same, the comyany cannot declare high dividends on expanded capital. By not declaring high dividends, it can avoid the tall claims of the employees and regulation by Government, and,

(*d*) Capitalisation of reserves increases substantially the credit-orthiness of the company.

(2) From the viewpoint of shareholders

(*a*) The shareholders can dispose of these shares and realise cash. ometimes they can be sold even at a premium, as only successful comanies can issue bonus shares.

(*b*) The shareholders can receive dividend on the increased share olding, and

(*c*) As it is very difficult to buy shares of successful companies from he market, the issue of bonus shares will enable the shareholder to ncrease his holding. In due course he will also have capital appreciation nd increased dividend.

Guidelines for bonus issue. The Government of India has prescribed ertain guidelines for the issue of bonus shares All applications for onus issue should be certified by the auditors of the company that guidelines prescribed by the Government for bonus shares issue are fully met and that all data furnished in the application is true and correct. The guidelines would govern the examination of such applications by the Controller of Capital Issue.

The following are the guidelines revised guidelines issued on 18-8-1941 :

[illegible]

2. Consequent to the issue of bonus shares if the subscribed and paid-up capital exceeds the authorised capital, a resolution passed at the general body meeting in respect of increase in the authorised capital is necessary.

3. The company should furnish a resolution passed at general body meeting for bonus issue before an application is made to the Controller of Capital Issues. In the general body resolution the management's intention regarding the rate of dividend to be declared in the year immediately after the bonus issue should be indicated.

4. The bonus issue is permitted to be made out of free reserves built out of the genuine profits or share premium collected in cash [illegible]

5. Reserves created by revaluation of fixed assets are not permitted to be capitalised.

6. Development rebate reserve/[illegible] is considered as free reserve for the purpose of calculation of [illegible] reserves test.

7. All contingent liabilities disclosed in the [illegible] which have a bearing on the net profits, shall be [illegible] the calculation of the minimum residual reserve.

8. The residual reserves after the proposed [illegible] be at least 40 per cent of the increased paid-up [illegible]

9. 30 per cent of the average profits before tax of the company for the previous three years should yield a rate of dividend on the expanded capital base of the company at 10 per cent.

10. Declaration of bonus issue in lieu of dividend is not allowed.

11. The company may make a further application for issue of bonus shares only after 36 months from the date of sanction by the government of an earlier bonus issue if any.

12. Bonus issues are not permitted unless the partly paid shares, if any, existing are made fully paid-up.

13. No bonus issue will be permitted if there is sufficient reason to believe that the company has defaulted in respect of the payment of statutory dues of the employees such as contribution of provident fund, gratuity, bonus, etc.

14. Capital reserves appearing in the balance sheets of the companies as a result of revaluation of assets or without accrual of cash resources will neither be allowed to be capitalised nor taken into account in the computation of the residual reserves of 40 per cent for the purpose of bonus issue.

15. At any one time the total amount permitted to be capitalised for issue of bonus shares out of free reserves shall not exceed the total amount of paid-up equity capital of the company.

16. Applications for issue of bonus shares should be made within one month of the bonus announcement by the board of directors of the company.

17. In cases where there is any default in the payment of any term loans outstanding to any public financial institution, a no objection letter from that institution in respect of the issue of bonus shares should be furnished by the companies concerned with the bonus issue application.

All applications for bonus issue should be signed by a person not below the rank of director/secretary together with a certificate as follows ;

I, Shri..................in my capacity as..............solemnly affirm that the facts stated above are true to the best of my knowledge and nothing has been withheld.

Signature....................

Name in capital letters................................
Principal Officer of the company

A certificate from the auditors of the company in the proforma as under shall also be furnished :

"We have verified the information furnished by the company for issue of bonus shares and find the same as correct. We also certify that we have received all the information required by us for the verification.

We hereby certify that the proposal contained in the application for the issue of bonus shares meets all the requirements of the bonus issue guidelines, including the guidelines contaided in paragraphs 8, 9, 11 and 13 in force issued by the Government in this regard

according to the information furnished to us and to the best of our knowledge."

Place :
Date :

Signature..........................
Auditors

Calculation of Quantum of Bonus

Out of the guidelines listed above only the following have a bearing regarding the amount which could be capitalised in one instalment :

(1) The residual reserves after the proposed capitalisation should be at least 40% of the increased paid-up capital. Development rebate reserve/investment allowance reserve is considered as free reserve for the purpose of calculation of residual reserves test. All contingent liabilities disclosed in the audited accounts having a bearing on the net profits, shall be taken into account in the calculation of the minimum residual reserves of 40%. See also guidelines (5) and (14).

For calculating the quantum satisfying this condition, let us evolve a formula :

Existing Capital	$=C$
Free Reserves	$=FR$
Quantum of Bonus	$=Q$
The Residual Reserves	$=FR-Q$
Increased Capital	$=C+Q$

To satisfy the condition

$FR-Q$ must equal $\frac{2}{5}$ of $C+Q$

or $FR-Q=\frac{2}{5}(C+Q)$

Solving the equation $Q=\frac{5FR-2C}{7}$.

(2) Thirty per cent of average profits before tax of the company for the previous three years should yield a rate of dividend on the expanded capital base of the company at 10 per cent.

As before let us evolve a formula to find out the quantum satisfying this condition.

The average profits for the past 3 years $=AP$

Existing capital of the compeny	$=C$
Quantum of bonus	$=Q$

Then to satisfy the condition

$$30\% \text{ of } AP=10\% \text{ of } C+Q$$

$$\cdot 3\,AP=\cdot 1\,(C+Q)$$

or Solving the equation

$$Q=3\,AP-C$$

Illustration 91. The following figures have been extracted from the books of *XYZ* Ltd as at 30-9-1977 :

	Rs.
Existing paid-up capital	1,00,00,000
Free reserves	1,20,00,000
Average profits during the 3 years preceding	45,00,000

(*a*) The company proposes to capitalise its reserves in order to declare fully paid bonus shares. One of the conditions to be satisfied for this purpose is the residual reserves after the proposed capitalisation should be at least 40% of the increased paid-up share capital. Advise the company in finding out the maximum amount available for capitalisation on this basis.

(*b*) The other condition that has to be satisfied for the proposed capitalisation is that 30% of the average profits before tax of the company for the previous three years should yield a rate of dividend on the expanded capital base of the company at 10%. Advise the company of the maximum amount that may be capitalised on this basis.

[*Adapted A.C.S. (Final) Dec. 1977*]

Solution : Amount that can be capitalised on the basis of condition (*a*).

$$Q=\frac{5FR-2C}{7}$$

where Q=Quantum of bonus

FR=Free Reserves

C=Existing capital

$$\therefore \quad Q=\frac{5\ (\text{Rs. } 120 \text{ lacs})-2\ (\text{Rs. } 100 \text{ lacs})}{7}$$

$$=\text{Rs. } 57{\cdot}14 \text{ lacs.}$$

Check : When a sum of Rs. 57·14 lacs is capitalised, expanded capital would be Rs. 157·14 lacs. Residual reserve would be (Rs. 120 lacs − Rs. 57·14 lacs) Rs. 62·86 lacs which works out to 40% of the expanded capital.

Amount that can be capitalised on the basis of condition (*b*).

$$Q=3AP-C$$

where Q=Quantum of bonus

AP=Average profits during the 3 preceding years

C=Existing capital

$$\therefore \quad Q=3\ (\text{Rs. } 45 \text{ lacs})-\text{Rs. } 100 \text{ lacs}$$

=Rs. 35 lacs.

[illegible]
be [illegible]
to [illegible]
Rs. 45 lacs. [illegible]

Tutorial Note : As both the conditions are to be satisfied the company can capitalise Rs. 35 lacs only. Therefore, it can issue one bonus share for every three shares held by the shareholders.

Accounting treatment. There are two ways of capitalisation of profits : (*a*) by utilising the amount in paying up any amount for the time being unpaid on any shares held by members ; and (*b*) for paying up in full unissued shares* of the company to be allotted and distributed, credited as fully paid up, to and among members. The accounting treatment in both the cases is different.

Case 1. Capitalisation by making partly paid up shares fully paid-up. Journal entries will be as follows :

1. *Debit* Profit and loss appropriation account or any other reserve account (For declaring bonus)
   Credit Bonus to shareholders account
2. *Debit* Share call account (For making call)
   Credit Share capital account
3. *Debit* Bonus to shareholders account (For applying the bonus towards the call of share)
   Credit Share call account

Illustration 92. A company had issued 20,000 shares of Rs 10 each, Rs. 8 called up The directors of the company now wish to apply the profits earned during the year for making the partly paid up shares fully paid up Give journal entries for carrying out their wishes.

Solution : JOURNAL ENTRIES

		Rs.	Rs.
Profit and loss appropriation account To Bonus to shareholders account	Dr.	40,000	40,000
Share final call account To Share capital account	Dr.	40,000	40,000
Bonus to shareholders account To Share final call account	Dr.	40,000	40,000

Case 2. Capitalisation by issuing fully paid-up bonus shares. Accounting entries will be as follows :

1. *Debit* Profit and loss appropriation account or share premium account or any other reserve account (for declaring bonus)
   Credit Bonus to shareholders account
2. *Debit* Bonus to shareholders account (for issuing bonus shares)
   Credit Share capital account

* The words 'or debentures' omitted by G S R. 631 dated 21-4-1966.

Illustration 93. A company had an issued share capital of Rs. 20,00,000 in Rs. 10 equity shares. It had share premium of Rs. 1,50,000, capital redemption reserve account of Rs. 75,000, and undistributed profit of Rs. 8,80,000. It was decided that fully paid-up bonus shares of Rs. 10 each be issued at the rate of one share for every four existing shares and that this resolution be carried out by using the minimum amount of undistributed profits. You are required to give journal entries.

Solution : JOURNAL ENTRIES

		Rs.	Rs.
Profit and loss appropriation account	Dr.	2,75,000	
Share premium account	Dr.	1,50,000	
Capital redemption reserve account	Dr.	75,000	
To Bonus to shareholders account			5,00,000
Bonus to shareholders account	Dr.	5,00,000	
To Equity share capital account			5,00,000

Illustration 94. A company issued 10,000 equity shares of Rs. 10 each, Rs. 8 paid up. It passed the following resolutions : (*a*) that profit be used in making the partly paid-up shares fully paid up; (*b*) that further 1,000 fully paid up bonus shares of Rs. 10 each be issued to the existing shareholders, (*c*) that the following balances appearing in the books be used. Share premium account, Rs. 2,000 and capital redemption reserve account Rs. 4,000. You are required to give journal entries for recording the above transactions.

Solution : JOURNAL ENTRIES

		Rs.	Rs.
Equity share final call account	Dr.	20,000	
To Equity share capital account			20,000
Profit and loss appropriation account	Dr.	20,000	
To Bonus to shareholders account			20,000
Bonus to shareholders account	Dr.	20,000	
To Equity share final call account			20,000
Share premium account	Dr.	2,000	
Capital redemption reserve account	Dr.	4,000	
Profit and loss appropriation account	Dr.	4,000	
To Bonus to shareholders account			10,000
Bonus to shareholders account	Dr.	10,000	
To Equity share capital account			10,000

Note : Share premium account and capital redemption reserve account are available only for fully paid-up bonus shares.

6—EXAMINATION QUESTIONS

Illustration 95. Big & Co. Ltd. is a company with an authorised capital of Rs. 5,00,000 divided into 5,000 equity shares of Rs. 100 each. On 31-12-68, 2,500 shares were fully called up.

The following are the balances extracted from the ledger of the company as on 31-12-68 :

	Rs.		Rs.
Stock	50,000	Advertisement	3,800
Sales	4,25,000	Bonus	10,500
Purchases	3,00,000	Debtors	38,700
Wages (productive)	70,000	Creditors	35,200
Discount allowed	4,200	Plant and machinery	80,500
Discount received	3,150	Furniture	17,100
Insurance up to 31-3-1969	6,720	Cash and bank	1,34,700
Salaries	18,500	Reserve	25,000
Rent	6,600	Loan from managing director	15,700
General expenses	8,950	Bad debts	3,200
Profit and loss account	6,220	Calls in arrear	5,000
Printing and stationery	2,400		

You are required to prepare trading and profit and loss account for the year ended 31-12-68 and the balance sheet as on that date of the company. The following further information is given : 1. Closing stock, Rs. 91,500 2. Depreciation to be charged on plant and furniture at 15% and 10% respectively. 3. Outstanding liabilities : wages, Rs 5,200, salary, Rs. 1,200 and rent, Rs 600. 4 Dividend @ 5% on paid-up share capital is to be provided. (Institute of Company, Secretaries, Final, 1969)

Solution : Big & Co. Ltd

TRADING AND PROFIT AND LOSS ACCOUNT

for the year ended 31st December, 1968

		Rs.		Rs.
To Stock, opening		50,000	By Sales	4,25,000
To Purchases		3,00,000	By Closing stock	91,500
To Wages		75,200		
To Gross profit c/d		91,300		
		Rs. 5,16,500		Rs. 5,16,500
To Salaries		19,700	By Gross profit b/d	91,300
To Discount allowed		4,200	By Discount received	3,150
To Insurance :	6,720			
Less : Prepaid	1,680			
		5,040		
To Rent		6,600		
To General expenses		8,950		
To Printing and stationery		2,400		
To Advertisement		3,800		
To Bonus		10,500		
To Bad debts		3,200		
To Depreciation :				
Plant and Machinery	12,075			
Furniture	1,710			
		13,785		
To Net profit c/d		16,275		
		Rs. 94,450		

	Rs.		Rs.
To Proposed dividend 5% on Rs. 2,45,000 (*i.e.*, excluding calls in arrear)	12,250	By Net profit for the year b/d	16,275
To Balance c/d	10,245	By Balance b/d	6,220
	R. 22,495		Rs. 22,495

BALANCE SHEET

as at December, 31, 1968

Liabilities		Rs.
SHARE CAPITAL :		
Authorised : 5,000 shares of Rs. 100 each		5,00,000
Issued and subscribed : 2,500 shares of Rs. 100 each fully called up	2,50,000	
Less Calls in arrear	5,000	
		2,45,000
RESERVES AND SURPLUS :		
Reserve		25,000
Profit and loss account		10,245
Secured loans :		nil
Unsecured loans :		
Loan from managing director (assumed unsecured)		15,700
CURRENT LIABILITIES AND PROVISIONS :		
A : Current liabilities :		
Creditors		35,200
Expenses outstanding		7,000
B : Provisions :		
Proposed dividend		12,250
		Rs. 3,50,395

Assets		Rs.
FIXED ASSETS :		
Plant and Machinery	80,500	
Less : Depreciation	12,075	
		68,425
Furniture	17,100	
Less : Depreciation	1,710	
		15,390
INVESTMENTS :		
Current assets loans and advances :		
A : Current assets :		
Stock (assumed at cost)		91,500
Debtors		38,700
Cash and bank balance		1,34,700
E : Loans and advances :		
Prepaid insurance		1,680
MISCELLANEOUS EXPENDITURE NOT YET ADJUSTED		nil
		Rs. 3,50,395

Note : Figures for the previous year and information relating to current liabilities could not be given for want of information.

Illustration 96. The following trial balance was extracted from the books of Cash Chemists Ltd. at March 31, 1966.

Debit	Rs.	*Credit*	Rs
Cash in hand	250	Share capital (Rs. 1,50,000 in Rs. 10 shares) 8,000 shares issued	80,000
Unpaid calls	600	Provision for taxation	16,900
Professional charges	2,570	Profit and loss account	44,000
Income-tax paid	10,000	Bank overdraft	16,000
Sundry sales ledger balances	1,27,000	Sales	10,42,000
Bank charges	1,430	Motor vehicles depreciation to 31st March, 1965	34,000
Advertising	3,000	Provision for doubtful debts at 31st March 1965	4,200
Office equipment at cost	10,600	Sundry purchase ledger balances	62,000
Motor expenses	5,000		
Purchases	8,72,400		
Motor vehicles, at cost	83,900		
Stock on 31st March 1965	69,000		
Travelling expenses	14,900		

Rent, rates, etc.	12,000	
Repairs and renewals	3,200	
Salaries and wages (including director's Rs. 15,000/-).	69,500	
Trade expenses	6,400	
Printing, stationery etc.	4,900	
Electric charges	2,450	
Rs	12,99,100	Rs. 12,99,100

Debts amounting to Rs 3,600 are to be written off as bad and the provision for bad debts is to be increased to Rs 6,150. The sales ledger balances *include goods supplied on "Sale or Return" basis* amounting to Rs. 4,800. These goods cost Rs. 4,000 and at March 31, 1966 one half had been retained by the customer.

The stock in godown at March 31, 1966 is valued at Rs. 81,000. The Motor expenses include licences for the year ended December 31, 1966 which cost Rs. 1,200 and insurance for the year to September 30, 1966 which cost Rs. 2,000. No provision has been made for expenditure on repairs amounting to Rs 800 The professional charges included Rs. 1,000 *in respect of the costs of increasing the authorised capital from* Rs. 80,000 to Rs. 1,50,000 during the year and these costs are to be written off though not as charge against revenue.

Depreciation of 20% on the original value of the motor vehicles and 10% *on the office equipment is to be provided. Provision is to be made* for electric charges estimated at Rs 450, telephone charges of Rs. 520 and audit fee of Rs. 1,200. The income tax liability for the accounting year ended 31st March 1965 (assessment year 1965-66) has been agreed at Rs. 15,050. For the accounting year ended on 31st March 1966 (assessment year 1966-67) the provision for taxation is to be Rs. 23,500.

Prepare trading and loss account for the year ended 31st March 1966 and balance sheet as at that date. (B. Com. Bombay, 1966)

Solution :

CASH CHEMISTS LTD.

TRADING AND PROFIT AND LOSS ACCOUNT

for the year ended 31st March 1966

	Rs.			Rs.
To Stock as on 1-4-65	69,000	By Sales	10,42,000	
To Purchases	8,72,400	*Less* Goods on sale on return basis	2,400	10,39,600
To Gross profit c/d	1,81,200			
		By Stock on 31-3-66 : In godown	81,000	
		On sale or return at cost	2,000	83,000

		Rs. 11,22,600		Rs. 11,22,600

To Salaries and wages (includes Rs. 15,000 for a director's fees)		69,500	By Gross profit b/d	1,81,200
To Electric charges		2,900		
To Printing and stationery		4,900		
To Trade expenses		6,400		
To Repairs and renewals		4,000		
To Rent, rates etc.		12,000		
To Travelling expenses		14,900		
To Motor expenses		3,100		
To Advertising		3,000		
To Bank charges		1,430		
To Professional charges		1,570		
To Bad debts written off		3,600		
To Provision for bad debts		1,950		
To Depreciation ;				
Motor vehicles	16,780			
Office equipment	1,060			
		17,840		
To Telephone charges		520		
To Audit fees		1,260		
To Provision for taxation		23,500		
To Net profit c/d		8,830		
		Rs. 1,81,200		Rs. 1,81,200

PROFIT AND LOSS APPROPRIATION ACCOUNT

	Rs			Rs.
To Professional charges for increasing the authorised capital written off	1,000	By Balance b/d		44,000
To Balance carried to balance sheet	53,680	By Profit for the year		8,830
		By Excess provision for Income-tax written back : -		
		Provision made	16,900	
		Actual liability	15,050	
				1,850
Rs.	54,680		Rs.	54,680

M/s. Cash Chemists Ltd.
BALANCE SHEET AS AT 31ST MARCH, 1966

Liabilities		Rs.	*Assets*		Rs.
SHARE CAPITAL :			FIXED ASSETS :		
AUTHORISED :			(*i*) Office equipment at cost	10,600	
15,000 shares of Rs. 10 each		1,50,000	*Less* Depr. written off	1,060	9,540
Issued, subscribed and paid-up :					
8,000 share of Rs. 10 each fully called up	80,000		(*ii*) Motor vehicles at cost	83,900	
Less Calls in arrear	600	79,400	*Less* Depreciation written off up to 31-3-1965	34,000	
RESERVES AND SURPLUS :					
Profit and loss account		53,680		49,900	

SECURED LOANS:		*Less* Depreciation written off during the year	16,780	33,120
Bank overdraft	16,000			
CURRENT LIABILITIES AND PROVISIONS:		CURRENT ASSETS, LOANS AND ADVANCES:		
(A) *Current liabilities*:		(A) *Current assets*:		
(*i*) Creditors for purchases	62,000	(*i*) Stock-in-trade		83,000
(*ii*) Creditors for expenses	3,030	(*ii*) Sundry debtors	1,27,000	
(*iii*) Liability towards income tax Assessment Year 1965-66 (15,050—10,000)	5,050	*Less* Goods out on sale or return basis	2,400	
(B) *Provisions*:			1,24,600	
Provision for taxation	23,500	*Less* Bad debts written off	3,600	
			1,21,000	
		Less Provision for bad debts	6,150	1,14,850
		(*iii*) Cash in hand		250
		(B) *Loans and advances*: Prepaid expenses		1,900
Rs.	2,42,660	Rs		2,42,660

Alternatively

M/s. Cash Chemists Ltd.
BALANCE SHEET as at March 31, 1966.

	Schedule No	*Figures at the end of current Financial Year*		*Figure at the end of previous year.*
I. SOURCES OF FUNDS:				
(1) Shareholders' Funds				
(*a*) Capital			79,400	
(*b*) Reserves and surplus			53,680	
(2) Loan Funds				
(*a*) Secured loans			16,000	
(*b*) Unsecured loans			—	
			1,49,080	
II. APPLICATION OF FUNDS:				
(1) Fixed Assets				
(*a*) Gross Block		94,500		
(*b*) *Less* depreciation		51,840		
(*c*) Net block			42,660	
(*d*) Capital work-in-progress		.	—	
(2) Investments			—	
(3) Current assets loans and advances				
(*a*) Inventories		83,000		
(*b*) Sundry debtors		1,14,850		
(*c*) Cash and bank balances		250		
(*d*) Other current assets		—		

(e) Loans and advances.			1,900		
			2,00,000		
Less Current liabilities and provisions :					
(a) Liabilities		70,080			
(b) Provisions		23,500			
			93,580		
Net current Assets				1,06,420	
(4) (a) Miscellaneous expenditure to the extent not written off or adjusted.				—	
(b) Profit and locs Account.				—	
				1,49,080	

TUTORIAL NOTES

(1) *Adjustment for outstanding and pre-paid expenses :*

	Amount as per trial balance	*Outstanding expenses (+)*	*Pre-paid expenses (—)*	*Expenses for the year*
	Rs.	Rs.	Rs.	Rs.
Electric charges	2,450	450	—	2,900
Repairs and renewals	3,200	800	—	4,000
Motor expenses	5,000	—	(Ins. 1,000 Licence 900)	3,100
Telephone charges	—	520	—	520
Audit fees	—	1,260	—	1,260
		Rs. 3,030	Rs. 1,900	

(2) Provision for income-tax Rs. 16,900 as shown in the trial balance is assumed to be fully for the assessment year 1965-66, so that when the assessment is over, the excess provision has been written back.

(3) Income-tax paid (Rs. 10,000) as shown in the trial balance is also assumed to be for the assessment year 1965-66 so that when the assessment is over, liability for the balance amount is created. It is assumed that no advance tax has been paid for the assessment year 1966-67.

(4) Provision for income-tax for the assessment year 1965-66 is shown under profit and loss account and not under profit and loss appropriation account since it is a charge on profits and not appropriation of profits.

Illustration 97. The following balances appeared on 31st December, 1965 in the books of True and Fair Ltd. Prepare the profit and loss account for the year ended 31st Dec. 1965, and balance sheet as on that date in the prescribed form :

	Dr.	*Cr.*
	Rs.	Rs.
Share capital : Authorised and issued shares of Rs. 10 each	—	30,00,000

General reserve	—	3,00,000
Provision for taxation on 1st January, 1965	—	4,41,000
Profit and loss account	—	5,73,850
Taxation payment	3,65,400	—
6% Mortgage debentures, redeemable 1970-75	—	10,00,000
Balance from trading account	—	10,52,000
Interim dividend for the year	1,72,500	—
Debenture redemption reserve	—	2,00,000
Share premium account	—	50,000
Directors fees	20,000	—
Unexpired payments	30,000	—
Debentures interest (less tax at 20%)	48,000	—
Creditors and accrued charges	—	20,34,800
Balance at bank	2,50,000	—
Cash on hand	5,000	—
Tax deducted at source on dividends on investments	15,750	—
Dividends on investments	—	50,000
Investments at cost (market value Rs. 4,73,750)	5,00,000	—
Debtors (including Rs. 12,800 due for more than six months)	24,55,000	—
Stocks and work-in-progress	16,60,000	—
Vehicles (cost Rs. 1,50,000)	1,00,000	—
Furniture and equipment (cost Rs. 2,00,000)	1,60,000	—
Plant and machinery (cost Rs. 30,00,000)	21,20,000	—
Land and buildings (cost Rs. 10,00,000)	8,00,000	—
	Rs. 87,01,650	Rs. 87,01,650

Notes : 1. Depreciation provision for the year charged against trading : Leasehold land and building Rs. 50,000 ; Plant and machinery Rs. 3,00,000 ; Furniture and equipment Rs. 16,000 ; and Vehicles Rs. 25,000.

2. Director's remuneration charged against trading : Salaries Rs. 1,00,000 and Pension to retired managing director Rs. 15,000.

3. Provision for taxation required Rs. 5,03,270.

4. Directors recommend : (*a*) transfer of Rs. 2,00,000 to debentures redemption reserve ; (*b*) transfer of Rs. 3,50,000 to general reserve ; and (*c*) Payment of final dividend of 12% subject to deduction of tax at appropriate rates. **(B. Com. Bombay, 1966)**

Solution :

M/s. True & Fair Ltd

PROFIT AND LOSS ACCOUNT

For the year ended 31st December 1965

	Rs.		Rs.
To Interest on debentures	60,000	By Gross profit b/d	10,52,000
To Directors' fees	20,000	By Directors' remuneration charged against trading	1,15,000
To Salaries to directors	1,00,000		
To Pension to retired managing director	15,000	By Dividend on investments (gross tax deducted at source Rs. 15,750)	50,[illegible]
To Provision for taxation	5,03,270		

	Rs.		Rs.
To Net profit c/d	5,18,730		
	12,17,000		12,17,000

PROFIT AND LOSS APPROPRIATION ACCOUNT

	Rs.		Rs.
To Interim dividend	1,72,500	By Balance b/d	5,73,850
To Transfer to debenture redemption reserve a/c	2,00,000	By Net profit for the year	5,18,730
To Transfer to general reserve	3,50,000	By Provision for taxation (excess provision made written back 4,41,000—3,65,40).	75,600
To Proposed dividend	3,60,000		
To Balance c/d	85,680		
	11,68,180		11,68,180

M/s. True & Fair Ltd.

BALANCE SHEET

as at 31st December, 1965

Liabilities		Rs.	*Assets*		Rs.
SHARE CAPITAL :			FIXED ASSETS (At cost less depreciaiion) :		
Authorised :			Gross block (as per schedule attached)	43,50,000	
3,00,000 shares of Rs. 10 each		30,00,000	*Less*: Depreciation (as per schedule attached)	11,70,000	31,80,000
Issued, subscribed and paid-up			INVESTMENTS		
3,00,000 shares of Rs. 10 each fully paid-up		30,00,000	At cost—quoted market value (Rs. 4,73,750)		5,00,000
RESERVES AND SURPLUS :			CURRENT ASSETS, LOANS AND ADVANCES :		
(i) Share premium account		50,000	(A) *Current assets* :		
(ii) Debenture redemption reserve balance as per last B/sheet	2,00,003		(i) Stock and work-in progress		16,60,000
Add : Transferred during the year	2,00,000	4,00,000	(ii) Sundry debtors :		
(iii) General reserve : Balance as per last balance sheet	3,00,000		(a) Debts outstanding for a period exceeding 6 months	12,800	
Add : Transferred during the year	3,50,000	6,50,000	(b) Other debts	24,42,200	24,55,000
(iv) Profit and loss ascount		85,680	(iii) Cash on hand		5,000
SECURED LOANS :			(iv) Cash at bank		2,50,000
6% Mortgage debentures, 1970-75		10.00.000	(B) *Loans and advances* :		
CURRENT LIABILITIES AND PROVISION			(i) Unexpired payment		30,000
(A) *Current liabilities* :			(ii) Advance payment of tax and tax deducted at source		15,75
(i) Creditors and accrued charges		20,34,800			
(ii) Income-tax deducted at source on debenture interest		12,000			
(B) *Provisions* :					
(i) Proposed dividend		3,60,000			
(ii) Provision for taxation		5,03,270			
Rs.		80,95,750	Rs.		80,95,75

TUTORIAL NOTES

1. It is assumed that income-tax deducted at source of Rs. 12,000 from interest on debentures is not paid so far (by including in taxation payments).

2. Interim dividend of Rs 1,72,500 is assumed to be gross

3. Since entry for tax deducted at source from dividends from investments is shown in the trial balance, dividend of Rs 50,000 is gross.

4. Tax payment taken as assessed tax and set off against old provision. Excess of old provision is credited to profit and loss account below the line.

SCHEDULE OF FIXED ASSETS ATTACHED TO AND FORMING PART OF ACCOUNTS

	Gross block as on 1-1-65	*Additions during the year*	*Gross block as on 31-12-65*	*Dep written off up to 1-1-65*	*Dep. during the year*	*Total dep. written off*	*Net block as on 31-12-66*
1. Leasehold land and building	10,00,000	—	10,00,000	1,50 000	50,000	2,00,000	8,00,000
2. Plant and machinery	30,00,000	—	30,00,000	5,80,000	3,00,000	8,80,000	21,20,000
3. Furniture and equipment	2,00,000	—	2,00,000	24,000	16,000	40,000	1,60,000
4. Vehicles	1,50,000	—	1,50,000	25,000	25,000	50,000	1,00 000
Total Rs.	43,50,000	—	43,50,000	7,79,000	3,91,000	11,70,000	31,80,000

Illustration 97. The following is the trial balance as on 30th June, 1978 of the Emerald Plastic Ltd.

	Dr.	Cr.
	Rs.	Rs.
Land and building at cost	3,36,300	
Plant, machinery and tools (original cost Rs. 3,60,000)	1,80,000	
Office furniture and fittings (original cost Rs. 45,000).	33,000	
Goodwill at cost	1,50,000	
Sundry debtors ledger control a/c	1,60,500	
Shares in subsidiary company 15,000 equity shares, fully paid-up, at cost (unquoted)	2,81,250	
Trade investment at cost	48,000	
Quoted investments at cost (market value on 30th June 1978 Rs. 1,30,200)	1,20,300	
Cash at bank and in hand	1,28,955	
Income-tax advance payment	1,20,000	

Income-tax deducted at source recoverable		29,925	
Stock of raw materials 1st July, 1977		1,39,800	
Stock of finished goods 1st July, 1977		19,050	
Work-in-progress 1st July, 1977		13,800	
Debenture interest half year to 31st December 1977		4,500	
Purchases—Raw materials		4,79,400	
Carriage inwards		28,350	
Wages		1,76,850	
Rates		9,450	
Salesmen's salaries		12,000	
Repairs to plant		13,650	
Salaries (including Directors' salaries of Rs. 30,000)		61,950	
Postage and telephone		2,700	
Printing and stationery		700	
Legal expenses		1,200	
Sundry trade expenses		900	
Director's fees		500	
Selling commission		7,800	
Power and lighting		10,0[illegible]0	
Insurance factory	10,800		
Office	600	11,400	
Advertisement		3,150	
Paid-up capital			
15,000 8% cumulative preference shares of Rs. 10 each			1,50,000
60,000 equity shares of Rs. 10 each			6,00,000
4% debenture stock—secured by a floating charge on the assets of the company			2,25,000
Share premium account			15,000
General reserve			1,50,000
Deposits from stockists, unsecured, short term			39,600
Due to subsidiary company			1,15,200
Profit and loss account 1st July 1977			15,900
Sundry creditors' ledger control a/c			1,16,850
Income-tax provision 1st July, 1977			87,930
Share transfer fees			200
Fees for inspection of registers			100
Share certificate fees			150
Interest and dividends on investments (gross) Trade Rs. 1,500 quoted Rs. 4,500			6,000
Dividends on shares in subsidiary—gross			57,000
Sales			10,06,500
		25,85,430	25,85,430

Stock on 30th June, 1978 were :

	Rs.
Raw materials	1,14,600
Work-in-progress	19,200
Finished goods	60,150

Accrued charges to be provided as under :

Power and lighting 3,600

Commissions	2,400
Audit fees	1,500

Depreciate plant, machinery and tools, and office furniture at [illegible] and 10% respectively on book values.

Of the provision for income-tax which stood on 1st July, [illegible] at Rs. 87,930, Rs. 82,000 is to be set off against the advance payment for income-tax that being the amount at which the liabilities of prior years were settled. The balance of Rs. 5,930 is to be written back to P. and L account. Provide income-tax on current year's profit at 45%.

Prepare the draft manufacturing, trading and profit and loss account [illegible]

(... April 1980)

Solution :

Emerald Plastic Ltd.

MANUFACTURING TRADING AND PROFIT AND LOSS ACCOUNT

for the year ended 30th June, 1975

		Rs.			Rs.
Opening stock :					
Raw materials		1,39,000	Trading account—		
Work-in-progress		13,800	Cost of finished goods		7,78,500
Purchases :		4,79,400	Closing stock—		
Carriage inwards		28,350	Raw materials		1,14,600
Wages		1,76,850	Work-in-progress		19,200
Power and lighting	10,050				
Add Accrued charge	3,600	13,650			
Fire insurance		10,800			
Repairs to plant		13,650			
Depreciation :					
Plant and machinery		36,000			
		9,12,300		Rs	9,12,300
Opening stock					
Finished goods		19,050	Sales		10,06,500
Manufacturing account—			Closing stock—		
cost of finished goods		7,78,500	Finished goods		60,150
Gross profit		2,69,100			
	Rs	10,66,650		Rs	10,66,650
Accrued audit fees		1,500	Trading account—		[illegible]
Rates		9,450	Gross profit		[illegible]
Salesmen's salaries		12,000	Fees for inspection		[illegible]
Salaries		31,950	Transfer fees		[illegible]
Directors' salaries		30,000	Share certificate fees		[illegible]
Postage and telephone		2,700	Interest and dividend (gross)		[illegible]
Printing and stationery		100	Dividends from subsidiaries		
Legal expenses		1,200			
Sundry trade expenses		900			
Directors' fees		500			
Selling commission	7,800				
Add Accrued	2,400	10,200			
Insurance-office		600			
Advertisement		3,150			
Depreciation :					
Furniture		3,150			
Debenture interest	4,500				
Add outstanding	4,500	9,000			

	Rs.		Rs.
Provision for taxation	96,930		
Net profit	1,18,470		
Rs.	3,32,550	Rs.	3,32,550
Cumulative preference Dividend @ 8%	12,000	Balance	15,900
Balance c/d	1,28,300	Net profit	1,18,470
		Provision for income-tax (previous year)	5,930
	1,40,300	Rs.	1,40,300

BALANCE SHEET OF EMERALD PLASTIC LTD.
as at June 30, 1978

Liabilities	Rs.	*Assets*		Rs.
SHARE CAPITAL :		FIXED ASSETS :		
Authorised capital		Goodwill		1,50,000
Issued, subscribed and paid-up—		Land and buildings		3,36,300
15,000 8% cumulative preference shares of Re. 10 each	1,50,000	Plant and machinery	3,60,000	
60,000 equity shares of Rs 10 each	6,00,000	*Less* Depreciation to date	2,16,000	1,44,000
RESERVES AND SURPLUS :		Furniture and fittings	45,000	
Share premium account	15,000	*Less* Depreciation	15,300	
General reserve	1,50,000			29,700
Profit and loss account	1,28,300	INVESTMENTS :		
SECURED LOANS :		Shares in subsidiary companies—		
4% debentures	2,25,000	15,000 fully paid equity shares		2,81,250
Interest accrued thereon	4,500	Investment in other companies		1,68,300
UNSECURED LOANS :		(Quoted investments at cost		
Short-term deposits from stockists	39,600	1,20,300 market value Rs. 1,30,200)		
CURRENT LIABILITIES AND PROVISIONS :		(Unquoted investments Rs. 3,29,250)		
A. Current Liabilities :		CURRENT ASSETS, LOANS AND ADVANCES :		
Sundry creditors	1,16,850	*A. Current Assets* :		
Due to subsidiary company outstanding payments	1,15,200	Raw materials		1,14,600
Power and lighting	3,600	Work-in-progress		19,200
Commission	2,400	Finished goods		60,150
Audit fees	1,500	Sundry debtors		1,60,500
B Provisions :		Cash at bank		1,28,955
Provision for taxation	96,930	*B. Loans and Advances*:		
Cumulative preference dividend	12,000	Advance payment of tax		38,000
		Tax deducted at source		29,925
		MISCELLANEOUS EXPENDITURE		
Rs.	16,60,880	Rs.		16,60,880

Illustration 99. The following is the trial balance of Ideal Manufacturers Ltd as on 30th September, 1970 :

Debit balances	Rs.	*Credit balances*	Rs.
Opening stock	1,32,000	Sales	7,76,000
Purchases	1,84,000	Departmental orders and items used in works	90,400
Stores and spares consumed	10,000	Dividends	1,000
Manufacturing and Misc. expenses	1,65,000	Profit on block sold	30,000
Salaries, wages, etc., to employees	1,90,000	Sundry receipts	3,000
Freight and insurance	57,000	Profit and loss account	20,000
Transfer to repairs reserve	52,000	Provision for depreciation on fixed assets	5,60,000
Interest on loan	22,500	Share capital	2,80,000
Depreciation	51,500	Share premium	20,000
Interim dividend	28,000	General reserve	80,000
Fixed assets at cost : Opening balance	12,60,000	Development rebate reserve	1,20,000
Addition	67,000	Repairs reserve	40,000
Investments	26,000	Secured loan	2,30,000
Debtors	1,02,400	Unsecured loan	50,000
Interest on capital during construction (from last year)	15,000	Creditors	1,70,000
		Provision for taxation	35,000

Deposits	[illegible]	Outstanding expenses	5,000
Cash at bank	1,40,000		
Cash in hand	2,000		
Managing director's remuneration (minimum)	6,000		
	Rs. 25,50,400		Rs. 25,50,400

The following [illegible] (2) [illegible] was [illegible] per cent [illegible] sold under Sec. 349 of the Companies Act, 1956, Rs. 20,000. (4) Depreciation allowable under income-tax laws Rs. 65,000. *(5) Profit and loss account:* Balance Rs. 20,000 has been arrived at after debiting for: Provisions for taxation Rs. 75,000 and Rs. 15,000 for development rebate reserve (6) Repairs reserve balance of Rs. 40,000 has been arrived at as follows Opening balance, Rs 38,000 plus transfer during the year, Rs. 52,000 minus actual expenses Rs. 50,000. (7) Final dividend making a total of 20 per cent on the paid-up capital of the company less interim dividend already declared has been proposed by the board of directors (8) Amount of share capital is composed of shares of Rs. 10 each fully paid.

You are required to prepare the profit and loss account for the year ended 30th September, 1970 and also to draw up a balance sheet as on that date. Show, separately, the computation of managing director's remuneration. (C A. Inter., 1970)

Solution:

PROFIT AND LOSS ACCOUNT OF IDEAL MANUFACTURERS LTD.

For the year ended 30th September, 1970

	Rs		Rs
To Opening stock	1,32,000	By Sales	7,76,000
To Purchases	1,84,000	By Departmental orders and items used in works	90,400
To Stores and spares	10,000	By Dividends (Grossed at 22%)	1,232
To Manufacturing and miscellaneous expenses	1,65,000	By Profit on sale of block	20,000*
To Salaries and wages to employees	1,90,000	By Sundry receipts	3,000
		By Closing stock	1,47,000
To Freight and Insurance	37,000		
To Transfer to repairs reserve	52,000		
To Interest on loan	22,500		
To Managing director's remuneration (1)	8,109		
To Depreciation	51,500		
To Provision for taxation	75,000		
To Net profit c/d (subject to taxation)	90,573		
	Rs. 10,37,682		Rs. 10,37,682
To Development rebate reserve	15,000	By Balance from last year	1,10,000[1]
To Interim dividend	28,000	By Net profit b/d	90,573
To Proposed dividend	28,000		
To Balance c/d	1,29,573		
	Rs. 2,00,573		

* Total profit on block sold less profit permitted under S Sec. 349 c

1. See footnote on the next page.

Tutorial Notes

(1) *Computation of managing director's remuneration :*

Net profit before debiting managing director's remuneration, depreciation and repairs reserve and taxation provision (90,573+75,000+8,109+52,000+51,500)	Rs.	2,77,182
Less Allowable depreciation and actual repairs (65,000+50,000)		1,15,000
		1,62,182
Managing director's remuneration @ 5%		8,109

(2) 1. Only actual repairs can be deducted for managerial remuneration purpose.

(3) Dividend has been grossed and managerial remuneration has been allowed on the gross income. Sometimes only net amount is considered. See 85th Annual Accounts of DCM. We have also considered only net income (income less tax deducted at source) in one of our illustrations on the managerial remuneration.

BALANCE SHEET OF IDEAL MANUFACTURERS LTD.
As on 30th September, 1970

Liabilities			Rs.	*Assets*		Rs.
SHARE CAPITAL				FIXED ASSETS :		
Authorised :				Cost as in the beginning of the year	12,60,000	
...Shares of Rs. 10 each			...	Addition during the year	67,000	
Issued, subscribed and paid-up :					13,27,000	
28,000 shares of Rs. 10 each fully paid			2,80,000	*Less* Provision for depreciation	5,60,000	7,67,000
RESERVES AND SURPLUS :				INVESTMENTS (AT COST)		26,000
Share premium		20,000		CURRENT ASSETS, LOAN AND ADVANCES		
Capital reserve		10,000*		(*A*) *Current assets* :		
General reserve		80,000		Stock in trade	1,47,000	
Development rebate reserve as per last				Sundry debtors	1,02,400	
Balance sheet	1,05,000			Cash at bank	1,40,000	
Since added	15,000	1,20,000		Cash in hand	2,000	
Repairs reserve		40,000			3,91,400	
Profit and loss account		1,29,573	3,99,573	(*B*) *Loans and advances* :		
SECURED LOAN			2,30,000	Deposits	40,000	
UNSECURED LOAN			50,000	Tax deducted at source on dividends	282	4,31,682
CURRENT LIABILITIES AND PROVISIONS :				MISCELLANEOUS EXPENSES AND LOSSES NOT YET ADJUSTED :		
(*a*) *Current liabilities* :				Interest on capital		15,000
Creditors for goods and expenses			1,77,109†			
(*b*) *Provisions* :						
Provision for taxation		75,000				
Proposed dividends		28,000	1,03,000			
			Rs. 12,39,682			Rs. 12,39,682

Tutorial Notes : In the absence of information, particulars of the following items have not been given : (*i*) Authorised capital : (*ii*) Nature of securi

† Creditors Rs. 1,70,000+Outstanding expenses Rs. 5,000+Outstanding remuneration Rs. 2,109 (*i.e.*, Rs. 8,109 less paid Rs. 6,000)

ties in case of secured loans [illegible] market value of investment ; (iv) Mode of [illegible] about sundry debtors and loa[illegible] at bank is in a scheduled bank or otherwise ; and (vii) Previous year's corresponding figures for each item.

Illustration 100 The following trial balance has been drawn up from the books of Wholesale Traders Ltd as on 31st March, 1970 :

	Rs.		Rs.
Authorised and issued capital (equity shares of Rs 10 each)	4,20,000	Investment income	3,400
Properties (at cost)	8,00,000	7% debentures	1,50,000
Motor van	25,000	Debenture interest	10,500
Provision for depreciation (as on 31-3-69) :		Bank interest	5,820
Leasehold property	[illegible]	Bank overdraft	7,300
Other properties	[illegible]	Debtors	3,10,000
Motor van	[illegible]	[illegible]	1,51,000
Administration and selling expenses	[illegible]	[illegible]	16,800
Opening stock	[illegible]	[illegible]	57,520
Purchases	[illegible]	[illegible]	1,000
Sales	[illegible]	[illegible]	1,00,000
Mg director's remuneration	[illegible]	[illegible]	3,000
Rent received	[illegible]	[illegible]	1,500
Investments (at cost)	[illegible]	[illegible]	15,100
		[illegible]	90,000

Opening balance has been calculated as under :

	Rs
1. Balance given in trial balance	20 000
Add Appropriations already made in arriving at the above balance : Tax provision	75 000
Development reserve	15,000
Opening balance before appropriation	Rs 1,10,000

The following further information is available :

1. Cl[illegible] Rs 1,67,000 2. No effect has [illegible] paid for a consideration of Rs. 3,000 received and lying credited to share suspense account 3. The Directors have recommended the following appropriations : (a) final dividend @ Rs 5 per share including the interim dividend already declared on 23rd December, 1969 , (b) transfer of Rs. 10,000 to general reserve. 4. Depreciation to be provided as follows : (a) motor [illegible] Property other than lease [illegible] purchased [illegible] years [illegible] of the net profit subject to a minimum of Rs. 50,000. Provision for taxation to be made @ 55 per cent. Ignore previous year's figures.

You are required to prepare the profit and loss account for the year ended 31st March, 1970 and also to draw up the balance sheet as on that date after making such assumptions as may be necessary.

(C.A. Inter , 1[illegible]1)

Solution :

Wholesale Traders Ltd
PROFIT AND LOSS ACCOUNT
For the year ending 31st March, 1970

		Rs.		Rs.
To Opening stock		1,20,000	By Sales	20,65,000
To Purchases		13,87,500	By Closing stock	1,67,000
To Administrative and selling expenses		1,76,500	By Rent received	36,000
To Debenture interest		10,500	By Income from investment (gross)	4,359[1]
To Bank interest		5,820		
To Managing directors' remuneration		54,724[3]		
To Depreciation :				
Motor van	3,000			
Leasehold	3,500			
Other properties	18,300			
		24,800		
To Provision for taxation		2,70,883[4]		
To Net profit c/d		2,21,632		
		Rs. 22,72,359		Rs. 22,72,359
To Interim dividend		16,800	By Balance b/d	57,520
To Proposed dividend		1,93,200	By Net profit b/d	2,21,632
To General reserve—proposed transfer		10,000		
To Balance c/d		59,152		
		Rs. 2,79,152		Rs. 2,79,152

BALANCE SHEET OF WHOLESALE TRADERS LTD
As at 31st March, 1970

Liabilities		Rs.	*Assets*		Rs.
SHARE CAPITAL :			FIXED ASSETS :		
Authorised, issued, subscribed and fully paid-up :			Property at cost	6,60,000	
42,000 equity shares of Rs. 10 each fully paid-up		4,20,000	*Less* Depreciation provided to-date	68,300	5,91,700
RESERVE AND SURPLUS			Leasehold property at cost	1,40,000	
Capital reserve		2,000[5]	*Less* Depreciation provided to-date	24,500	1,15,500
General reserve :			Motor van at cost	25,000	
As per last balance sheet	1,00,000		*Less* Depreciation provided to-date	13,000	12,000
Proposed transfer	10,000	1,10,000	INVESTMENTS : (at cost)		
Profit and loss account		59,152	Fully paid shares of companies (Market value Rs. 70,400)		67,500
SECURED LOANS :			CURRENT ASSETS, LOANS AND ADVANCES		
7% Debentures (secured by floating charge on all the assets)		1,50,000	Current assets :		
UNSECURED LOANS :			Stock-in-trade (at or under cost)		1,67,000
Bank overdraft (Secured by personal guarantees of directors)		7,300	Sundry debtors (considered good) :		
CURRENT LIABILITIES AND PROVISIONS			Outstanding for a period exceeding 6 months	1,10,000	
(A) Current liabilities :			Other debts	2,00,000	3,10,000
Sundry creditors	1,55,724[*]		Cash at bank		90,000
Unclaimed dividends	1,500	1,57,224			

(B) Provisions :			Cash in hand	15,100
Proposed dividends	1,93,200			
Provision for taxation less tax deducted at source	2,69,924*	4,63,124		
		Rs. 13,68,800		Rs. 13,68,800

* Rs. 1,51,000+managing director's outstanding remuneration Rs. 4,724.

TUTORIAL NOTES

1. Investment income has been grossed up at 22% to Rs 4,359, *i.e.*, 3,400×100/78, since tax deducted at source is 22% of the dividend payable. Tax deducted at source has been subtracted from the tax provision instead of showing on the assets side as advance payment of tax.

2. Depreciation :

	Rs.
Total cost of properties	8,00,000
Less Leasehold	1,40,000
	6,60,000

	Other properties	Leasehold	Motor van
Total cost	6,60,000	1,40,000	25,000
Less Depreciation up to 31st March, 1969	50,000	21,000	10,000
	6,10,000	1,19,000	15,000
Current year's depreciation	18,300	3,500	3,000

3. Managing directors' remuneration :

	Rs.
Net profit after the remuneration but before tax	4,92,515
Add Remuneration	54,724
Net profit before debiting the remuneration and provision for taxation	5,47,239
Managing Director remuneration at 10% thereof	54,724

4. Taxation Profit as above	5,47,239
Less Managing director's remuneration	54,724
	4,92,515
Provision required at 55% (shown in P. and L. account)	2,70,883
Less Tax deducted at source	959
Provision shown in balance sheet	[illegible]

5. Capital reserve :

Amount received from previous shareholders	4,000
" " " present "	3,000
	7,000
Less Fully paid-up value	5,000
Capital reserve	2,000

Illustration 101.

The following balances have been extracted from the books of Sure Success Ltd, as on 31st December, 1972 :

Debit Balances	Rs.	*Credit Balances*	Rs
Land : at cost	37,2?0	Share capital	2,00,000
Buildings (cost less depreciation)	1,50,000	General reserve	80,000
Plant (cost less depreciation)	80,000	Share premium	20,000
Furniture (cost less depreciation)	15,000	Gross profit	1,02,250
Selling expenses	12,000	Provision for taxation (opening balance)	15,000
Directors' fees	2,400	Bad debts realised	1,500
Administrative expenses	38,000	6 per cent debentures (unsecured)	2,00,000
Sinking fund investment	40,800		
Calls-in-arrear	3,000	Profit and loss account (opening balance)	5,000
Bad debts	2,000		
Sundry debtors	1,45,000	Sinking fund for debenture redemption	40,800
Audit fees	1,000	Sundry creditors	23,000
Advance payment of :		Interest on sinking fund investments	2,500
Income-tax for 1971	12,000		
Income-tax for 1972	8,000	Miscellaneous receipts	3,000
Clossing stock	65,000	Liabilities for expenses	4,000
Cash in hand	5,600		
Cash at bank	68,000		
Debenture interest	12,000		
Rs.	6,97,050	Rs.	6,97,050

The following further particulars are available : 1. The basis of valuation of closing stock has been changed from this year resulting in an additional profit of Rs. 3,000 as compared to valuation on old basis. 2. Administrative expenses include Rs. 6,000 paid to managing director, as an advance against his remuneration. 3. Sinking fund is to be credited with Rs. 20,000 which together with the interest received would be invested on 1st January, 1973. 4. Income-tax assessment for 1971 has been completed on 20th December 1972 on a gross demand of Rs. 14,000 but no effect has been given in the books. 5. At a meeting held on 25th November 1972 the board of directors decided to allot one fully paid bonus share against two shares held by members who are not in default in payment of calls. This was sanctioned by the members on 18th December 1972 but no effect has been given to it. 6. The managing director is entitled to a remuneration calculated at 5 per cent of the net profits. 7. Provisions for taxation are to be made as follows : (*a*) Income-tax at 45 per cent ; (*b*) Special surcharge at 5 per cent on Income-tax. 8. Out of sundry debtors, Rs. 40,000 are due for more than six months. There is no doubtful amount. 9. Depreciation written off up to last year at rates mentioned against each are as follows : (*a*) Building Rs. 5,000 at $2\frac{1}{2}\%$; (*b*) Plant Rs. 45,000 at 15% ; (*c*) Furniture Rs. 5,000 at 10%

10. Market value of sinking fund investments on 31st December 1972, Rs. 42,000. 11. Calls-in-arrear are due on 1,000 shares, out of 20,000 shares of 10 each fully called up.

You are required to prepare the profit and loss account for the year ended 31st December, 1972 and a balance sheet as at that date.

(C. A. Inter, 1973)

Solution.

SURE SUCCESS LTD
PROFIT AND LOSS ACCOUNT
For the year ending 31st December 1972

	Rs.		Rs.
To Administration expenses (38,000—6,000)	32,000	By Gross profit b/d	1,02,250
To Provision for depreciation	17,250	By Bad debts recovered	1,500
To Selling expenses	12,000	By Miscellaneous receipts	3,000
To Directors' fees	2,400	By Interest on sinking fund investments	2,500
To Audit fee	1,000		
To Debenture interest	12,000		
To Bad debts	2,000		
To Managing director's remuneration	1,530		
To Provision for taxation 47.25% of Rs. 29,070	13,735		
To Balance c/d	15,335		
Rs.	1,09,250	Rs.	1,09,250
To Sinking fund for redemption of debentures	21,319	By Balance b/d	5,000
To Balance c/d	16	By Net profit for the year	15,335
		By Excess provision for taxation, written back (15,000—14,000)	1,000
Rs.	21,335	Rs.	21,335

Note: The basis of valuation of closing stock was changed this year resulting in an additional profit of Rs 3,000 as compared to valuation on the previous basis.

Note regarding managerial remuneration

	Rs
Balance as per profit and loss account	15,335
Add Income-tax provision	13,735
Manging director's remuneration	1,530
Profit before tax and remuneration	30,600
Remuneration at 5%	1,530

BALANCE SHEET OF SURE SUCCESS LTD
as on 31st December, 1972

Liabilities	Rs.	*Assets*	Rs	Rs.
SHARE CAPITA :		FIXED ASSETS :		37,250
Authorised . shares . Rs...each		Land at cost	1,55,000	
Issued, subscribed 29,500		Building at cost	8,750	
		Less Depreciation		14[illegible]

Liabilities		Rs.	Assets		Rs.
Less Calls-in-arrear		3,000	Plant at cost	1,25,000	
		2,92,000	*Less* Depreciation	57,000	68,000
(Out of the above, 9,500 shares of Rs. 10 each have been issued as fully paid-up as bonus shares out of share premium and general reserve)			Furniture at cost	20,000	
RESERVE AND SURPLUS :			*Less* Depreciation	6,500	13,500
Share premium	20,000		INVESTMENTS :		
Less Utilised for issue of bonus shares	20,000	—	Against sinking fund for redemption of debentures (Market value Rs. 42,000)		40,800
Profit and loss account		16	CURRENT ASSETS, LOANS AND ADVANCES.		
Sinking fund for redemption of debentures :			(A) *Current assets* :		
Balance b/f	40,800		Stock in trade (at or below cost)		65,000
Addition during the year	21,319	62,119	Debtors (unsecured considered good)		
General reserve	80,000		Due for more than 6 months	40,000	
Less Utilised for issue of bonus shares and for bonus suspense account	80,000	—	Other debts	1,05,000	1,45,000
SECURED LOANS :		nil	Cash in hand		5,600
UNSECURED LOANS :			Cash at bank		68,000
6% Debentures		2,00,000	(B) *Loans and advances* :		
CURRENT LIABILITIES AND PROVISIONS :			(Unsecured considered good)		
(A) *Current liabilities* :			Due from managing director (Maximum amount due Rs. 6,000)		4,470
Sundry creditors		29,000			
(B) *Provision* : Taxation	13,735				
Less Advance payment	8,000	5,735			
Bonus suspense account		5,000			
	Rs.	5,93,870		Rs.	5,93,870

TUTORIAL NOTES

(*i*) Creditors : Sundry creditors — 23,000
For expenses — 4,000
For tax (14,000—12,000) — 2,000

Total — 29,000

(*ii*) Depreciation :

	Rs
On building Rs. 1,50,000 at $2\frac{1}{2}\%$	3,75
On plant Rs. 80,000 at 15%	12,00
On furniture Rs. 15,000 at 10%	1,50
	17,25

(*iii*) Transfer to debenture redemption fund :

Annual instalment		20,00
Add Interest received	2,500	

Less income tax applicable to this item 47·25%, *i.e.*, 45%+ 5% of 45%	1,181	1,319
		21,319

(*iv*) Advance against managing director's remuneration :

Amount paid	6,000
Less Amount payable	1,530
Balance due	4,470

(*v*) Bonus shares :

Total number of shares	20,000
Less 'Defaulting' members, not eligible at present	1,000
	19,000

Bonus shares at the rate of 1 for 2, 9,500 of Rs. 10 each

In issuing bonus shares, the share premium account of Rs. 20,000 has been fully utilised and the balance of Rs. 75,000 taken out of general reserve. The amount which would be utilised for issuing bonus shares, when the calls in arrear are paid, has been put to suspense account by debit to general reserve.

(*vi*) Figures for the previous year have not been given for want of information.

(*vii*) Tax provision for the current year has been calculated on profits of Rs. 29,070, *i.e.*, Rs. 13,735+Rs. 15,335.

(*viii*) Debenture interest payment shown in the trial balance is 6% of debentures. This means no tax has been deducted at source.

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'True' or 'False' :

(*a*) Provision is the amount set aside or written off for any known liability of which the amount cannot be determined with substantial accuracy.

(*b*) The shareholders can increase the rate of dividend recommended by the directors, if they consider it too low.

(*c*) No dividend is paid on calls-in-advance.

(*d*) Managerial remuneration is to be calculated only after providing for taxation.

(*e*) Tax deducted at source will appear under the heading current assets, loans and advances.

(*f*) When a company is having whole-time directors, it cannot have both managing director and manager.

(*g*) Dividend can be declared after providing for current year's depreciation.

(*h*) Any dividend remaining unpaid after 3 years from the date on which it became due can be transferred to capital reserve.

(i) Development Rebate Reserve according to the guidelines for bonus is considered as free reserve and is also allowed to be capitalised.

(j) Bonus issues can be made even when the shares are partly paid.

II. Fill in the Blanks :

(a) The expression "Revenue Reserve" shall mean any reserve other than a... ... .

(b) No transfer to reserves is obligatory if the proposed dividend does not exceed... .

(c) Not more than two bonus issues will be allowed to a company over a period of...years.

(d) The maximum remuneration payable to managerial personnel is...of the net profits calculated in accordance with Sections 349 and 350 of the Companies Act.

(e) According to the present guidelines on managerial remuneration in force, salary payable cannot exceed Rs....per annum.

(f) Provision for taxation is to be shown in the balance sheet under the head... .

(g) The difference between the gross dividend receivable and dividend received is debited to... ... ...

(h) In the balance sheet forfeited shares amount is to be added to... ... .

(i) Dividend declared between two Annual General Meetings is called the... ... .

(j) When the proposed dividend is more than 20%, an amount equal to...of the current profits must be transferred to reserve.

III. Indicate the correct answer :

(a) In the balance sheet of a company the items Goodwill, Patents and Trade marks are shown under the heading

1. Current Assets
2. Loans and Advances
3. Fixed Assets.

(b) Preliminary expense is

1. Current Asset
2. Fictitious Asset
3. Current Liability.

(c) Divisible profits do not include

1. Reserve Fund
2. Profit on revaluation of assets
3. Post-incorporation profits.

(d) Advance payment of tax should be shown on the

1. Assets side of the balance sheet
2. Liabilities side of the balance sheet
3. Debit side of Profit and Loss Account.

(e) Dividends are usually paid on

1. Called-up Capital

2. Paid-up Capital
3. Nominal Capital.

(*f*) Dividend becomes payable when it is
1. Recommended by directors
2. Demanded by shareholders
3. Recommended by directors and approved by shareholders.

(*g*) Indicate the item that figures in the Profit and Loss Account below the line
1. Provision for Taxation
2. Transfer to Sinking Fund
3. Contribution to Provident Fund.

(*h*) Amount set apart to meet losses due to bad debts is a
1. Provision
2. Reserve
3. Liability.

(*i*) When the proposed dividend is 15%, the percentage of profits to be transferred to reserves is
1. Nil
2. 5%
3. 10%

(*j*) X Ltd. made a loss of Rs. 30,000 after providing for depreciation [illegible] In 1977, it made a profit of Rs [illegible] depreciation. The amount available [illegible]
1. Rs. 1,00,000
2. Rs. 50,000
3. Rs. 70,000.

Exercises

1. Under what heading will you classify the following items :
(*a*) preliminary expenses ; (*b*) unclaimed dividend ; (*c*) bills of exchange ; (*d*) loose tools.
[*Miscellaneous expenditure* ; *Current liabilities* ; *Loans and advances* ; *Current assets*]

2. Re-arrange the following heads of asset side of balance sheet :
(*a*) fixed assets ; (*b*) miscellaneous expenditure ; (*c*) loans and advances ; (*d*) investments ; (*e*) current assets.
[*1. Fixed assets ; 2. Investments . 3 Current assets . Loans and advances—(i) Current assets (ii) Loans and advances . 4 Miscellaneous expenditure*]

3. Under what heading will you show the following items :
(*a*) Share premium account, (*b*) Proposed dividend, (*c*) Unclaimed dividend, (*d*) Forfeited shares account, (*e*) Arrears of fixed cumulative dividend.
[*Reserve and surplus ; Provisions ; Current liabilities ; Share Contingent*]

4. Under what [illegible] the following . [illegible]

[(*i*) *and* (*iii*) *Current assets* ; (*ii*) *and* (*v*) *Loans and advances* ; (*iv*) *Fixed assets* ; (*vi*) *Miscellaneous expenditure*]

5. Under what heads will you classify the following items on the liability side of the balance sheet of a limited company : (*a*) Unclaimed dividend : (*b*) Proposed dividend ; (*c*) Interest accrued and due on secured loans : (*d*) Interest accrued and due on unsecured loans ; (*e*) Provision for taxation ; (*f*) Arrears of fixed cumulative dividends : (*g*) Share premium account ; (*h*) Share forfeited account. **30:2**

[(*a*) *Current liabilities* ; (*b*) *Provisions* ; (*c*) *Secured loans* ; (*d*) *Unsecured loans* ; (*e*) *Provision* ; (*f*) *As a footnote under the balance sheet* ; (*g*) *Reserves and surplus* ; (*h*) *Share capital account—added in subscribed capital*]

6. How would you recommend the following items should be dealt with in the accounts of a limited company : (*a*) Preliminary expenses Rs. 1,200 ; (*b*) Premium of Rs. 3,000 paid for 21 years' lease of premises ; (*c*) Rs. 1.500 expended in structural alterations to the above premises ; (*d*) Rs. 5,000 received as premium on shares issued ; and (*e*) 500 Rs. 10 shares forfeited on which Rs. 5 per share had been paid.

(B. Com., Madurai, 1973 ; Modified)

7. What do you understand by the terms "Provisions", "Reserves", "Reserve Fund", and "Capital Reserves" ? Give a few examples of "Capital Reserves". **(Indian Institute of Bankers, Part II, 1966)**

8. State briefly the items that are included in any two of following major heads under which assets of a limited liability company are shown :

(*a*) Fixed assets : (*b*) Investments ; (*c*) Current assets, loans and advances ; and (*d*) Miscellaneous expenditure.

(Indian Institute of Bankers, Part II, 1968)

9. State briefly the items that are included in *any two of the following* major heads under which liabilities of a limited company are shown :

(*i*) Reserves and surplus ; (*ii*) secured loans ; (*iii*) unsecured loans ; (*iv*) current liabilities and provisions ; and (*v*) contingent liabilities.

(Indian Institute of Bankers, Part II, 1968)

10. How would you treat the following items in preparing the balance sheet : (*a*) You are to take Rs. 5,00,000 out of a bank's profit and place to secret reserve undisclosed to shareholders ; (*b*) Donations received by a club to build a new tennis court (not commenced) ; (*c*) Debenture redemption fund, all the debentures having been paid off out of cash ; (*d*) Interest received by a new company on share capital invested, business not having commenced ; and (*e*) Remittances in transit between head office and branches and interest.

(Indian Institute of Bankers. Part II, 1965)

11. Show how will you exhibit the following independent transactions under the heading capital in the balance sheet of a limited company : (*a*) A company offered 70,000 equity shares of Rs. 10 each. The public applied for only 60,000 shares. All these shares were fully called and paid. (*b*) A company offered 70,000 equity shares of Rs. 10 each. The public applied for only 60,000 shares. Rs. 8 per share was called and paid. (*c*) A company offered 70,000 equity shares of Rs. 10 each. The public applied for only 60,000 shares. Rs. 8 per share was called. All money except Rs. 2 per share on 200 shares was received. Of these 50

shares were held by one of the directors. (*d*) A company offered 70,000 equity shares of Rs 10 each. The public applied for 90,000 shares. The company returned the excess money, Rs. 8 per share was called. 40 shares were forfeited on non-payment of ...

for consideration other than cash. 30.3

12. Show how you will exhibit the following items in the balance sheet of a limited company as on December 31, 1971 :

(*i*) Original cost of building Rs. 4,00,000, (*ii*) Book value of building on Jan. 1, 1971 Rs. 2,80,000, (*iii*) Depreciation to be written off at 5% on written-down value. 30.4

[*Total depreciation to be deducted from the original cost Rs. 1,34,000*]

13. Re-arrange the following items under the three heads : (*i*) Fixed assets, (*ii*) Current assets, and (*iii*) Loans and advances :

(*a*) Livestock	(*h*) Leasehold	(*o*) Cash in hand
(*b*) Loose tools	(*i*) Stock-in-trade	(*p*) Work-in-progress
(*c*) Goodwill	(*j*) Stores and spare parts	(*q*) Plant
(*d*) Trade marks	(*k*) Furniture	(*r*) Interest accrued
(*e*) Bills receivable	(*l*) Vehicles	(*s*) Deposits with port trust and electricity supply company
(*f*) Debtors	(*m*) Advances to subsidiary	
(*g*) Land	(*n*) Cash with bank	

[*Fixed assets* : (*c*) (*g*) (*h*) (*q*) (*k*) (*d*) (*a*) (*l*) ; *Current assets* : (*r*) (*j*) (*b*) (*i*) (*p*) (*f*) (*o*) (*n*) ; *Loans and advances* : (*m*) (*e*) (*s*)]

Problems

14. ... authorised capital of Rs. 2,00,000 divided into ... 000 equity shares of ... ordinary shares are ... as ascertained that the company had made a net profit of Rs. 26,100. There was a balance of Rs. 2,700 brought forward from the previous year. The directors decided : (*a*) to transfer Rs. 5,000 to general reserve ; (*b*) to pay preference dividend for the year ; and (*c*) to propose a dividend of 13 per cent on equity shares.

Show how the above information would appear on the appropriation account. Draw up liability side of the balance sheet as on December 31, 1971. (*Balance of appropriation account Rs. 4,800*)

15 ... authorised capital of Rs. 2,00,000 divided into 2,(... 00 equity shares of Rs. ... fully paid. Out of equi ... led and paid. On December 31, 1971 the company's general reserve was Rs. 30,000 ; Current liabilities Rs. 7,500 ; Current assets Rs. 62,750 ; Fixed assets (at cost) Rs 90,000 ; and provision for depreciation on fixed assets Rs. 20,250.

Make a summarised balance sheet as on December 31, 1971 to display this information. Set out the balance sheet in such a way as to show clearly the net value of current assets.

[*Balance sheet total Rs. 1,25,000 ; Net value of current assets Rs 55,250*]

16. How would you deal with the undermentioned items when preparing the annual accounts of a limited company : (1) Transfer of Rs. 50,000 to reserve fund. (2) Rs. 700 commission and expenses incurred on the issue of 8,00,000 7% debentures repayable in 10 years from the date of issue. (3) Transfer of Rs. 35,000 to the company's own fire insurance fund. (4) On issue of 1,000 5% debentures of Rs. 100 each at 95 repayable (in 10 years from the date of issue) at par.

(Indian Institute of Bankers, Part II, 1965)

17. A Limited Company has resolved to utilise Rs. 5,00,000 out of its reserve fund in declaration of a bonus to the shareholders. The bonus, however, is to be applied to the extent of Rs. 2,00,000 in payment of final call of Rs. 40 per share on 5,000 equity shares of Rs. 100 each and to the extent of Rs. 3,00,000 in the issue of 3,000 fully-paid equity shares of Rs. 100 each to the existing shareholders. Give the journal entries necessary to give effect to the above resolution.

(Indian Institute of Bankers, Part I, 1959)

18. The capital of a limited liability company consists of 1,00,000 equity shares of Rs. 10 each, fully-paid, and 1,00,0C0 equity shares of Rs. 8 per share paid-up. The two lots were issued at two different times. The company has the following undisposed of balances in the various accounts : (*a*) Rs. 1,26.955 in the profit and loss account ; (*b*) Rs. 4,85,600 in the general reserve ; (*c*) Rs. 1,00,000 in share premium account ; and (*d*) Rs. 5,00,000 in capital redemption reserve account.

The company has decided in its general meeting to capitalise a part of the above balances : (1) by paying as bonus Rs. 2 per share on the partly paid equity shares so as to make them fully paid by transferring Rs. 1,00,000 from the profit and loss account balance and Rs. 1,00,000 from general reserve, and (2) by issuing 1,00,000 fully-paid equity shares at par as bonus, face value Rs. 10 per share by transferring (*a*) 25,000 from the profit and loss account balance, (*b*) Rs. 3,75,000 from general reserve. (*c*) Rs. 1,00.000 from share premium account, and (*d*) Rs. 5,(0 000 from capital redemption reserve account.

Draft the necessary journal entries to give effect to the above transactions. (Indian Institute of Bankers, Part II, 1970)

19. What do you understand by capitalisation ? What are the methods of capitalisation ? Give accounting treatment of all.

The following are the extracts from the draft balance sheet of *X* Ltd. as on December 31, 1962 :

	Rs.
Authorised capital :	
1,00,000 equity shares of Re. 1 each	1,00,000
Issued and subscribed capital :	
50,000 equity shares of Re. 1 each fully called up	50,000
Reserve fund	30,000
Profit and loss account	15,000

A resolution was passed declaring bonus of 20% on equity shares to be provided as to Rs. 6,000 out of reserve fund and the balance out of profit and loss account. The bonus was to be satisfied by issuing fully paid equity shares. You are required to set out journal entries to give

effect to the resolution and show how they would affect the balance sheet.
(C. A. Inter., 1962) 30·6

20. The capital of a limited company consisted of 12,500 5% preference shares of Rs. 10 each and 25,000 equity shares of Rs. 10 each and the company has accumulated, out of profits, a reserve fund of Rs. 1 lakh. It further issued 5,000 equity shares during the year at a premium of Rs. 15 per share, and the whole amount has been realised. At the end of the year an independent [illegible] figure as follows : [illegible] nery by Rs. 1,50,0[illegible] reduced the amount of the following : Goodwill by Rs. 75,000, concession rights by Rs. 50,000.

It was decided (*i*) to redeem 15,000 debentures of Rs 100 each at 5% premium ; (*ii*) to allot one bonus share of Rs. 10 as full-paid up for every equity share held, and (*iii*) to adopt new valuation. Make journal entries and comment on the proposal. (C A. Final, 1957) 30 7

21. The following items appeared in the balance sheet of Alpha Co. Ltd. on 31st March 1978 :

(*i*) Authorised share capital : 50,000 shares of Rs. 10 each. (*ii*) Issued and subscribed share capital : 40,000 shares of Rs 10 each of which Rs. 9 per share has been called up and paid. (*iii*) General Reserve Rs 2,40,000. (*iv*) Profit and loss account (Cr) Rs. 16,325. (*v*) Proposed dividend Rs. 36,000.

[illegible] held on 10th August 1978 [illegible] (*i*) To declare dividend as [illegible] al bonus of Rs 5 per share as recommended by the directors to be satisfied partly by making the existing shares fully paid and partly by issuing fully-paid bonus shares at a premium of 60%. The resolutions were carried into effect on 30th August, 1978. A separate 'dividend bank account' was opened with State Bank of India and all the shareholders claimed the amounts of dividends from the bank up to 15th September, 1978.

Pass journal entries to record these transactions in the books of the company and show how the items will be shown on the liabilities side of the balance sheet.

[illegible]

(Rs in lakhs)

(1) Share capital as on 31-3-1978 :

(*a*) Authorised capital :

9,00,000 Equity shares of Rs. 100 each	900 00
25,000 9% Cumulative preference Shares of Rs. 100 each	25 00
	925 00

(*b*) Issued, subscribed and paid-up capital :

4,00,000 equity shares of Rs. 100 each (including 1,00,000 equity shares issued for consideration other than cash)–	400 00

25,000 9% Cumulative preference shares of Rs. 100 each	25·00
	425·00

(2) Reserves and surplus as on 31-3-1978 :

Capital reserve	5·00
Share premium account (includes Rs. 25 lakhs premium on shares issued for consideration other than cash)	75·00
Capital redemption reserve fund	50·00
Development rebate reserve	125·00
General reserve	460·00
Surplus in profit and loss account	77·25
	792·25

(3)	Tax liabilities disputed in appeal as on 31-3-1978	15·00
(4)	Unprovided amount of accrued gratuity as on 31-3-1978	45·00
(5)	Proposed dividend for the year 1977-78	62·25
(6)	Pre-tax profits for last four years ended on :	
	31-3-1978	192·00
	31-3-1977	154·00
	31-3-1976	185·00
	31-3-1975	160·00

Assuming that the following are the salient points from the guidelines issued by the Controller of Capital Issues for issue of bonus shares, give your working in support of your advice to the directors in respect of their proposal to issue the bonus shares :

1. The bonus issue must be within the authorised capital of the company.

2. The bonus issue is permitted out of Free Reserves (including the surplus in the profit and loss account) built up from genuine profits or share premium collected in cash only.

3. Reserves, created by revaluation of fixed assets, are not permitted to be capitalised.

4. The residual reserves, remaining after capitalisation, should be at least equal to $33\frac{1}{3}\%$ of the increased paid-up capital.

5. Capital redemption reserve should not be included in computing the residual reserves.

6. Contingent liabilities, having a bearing on net profits, should be taken into consideration while calculating residual reserves of $33\frac{1}{3}\%$ referred to above.

7. 30% of the average pre-tax profits (after providing for preference dividend, if any) of the preceding three years, should yield a rate of dividend, on the expanded equity capital, of at least 9%.

8. Capital reserves are neither allowed to be capitalised nor considered for residual reserves test, of $33\frac{1}{3}$ per cent, referred to above.

(C.A. Final, Nov., 1978)

[As per condition (7) above, only Rs. 165 lakhs can be capitalised. Therefore, the directors cannot issue one bonus share for every two equity shares held.]

23. The summarised balance sheet of a limited company on 31st December, 1969 was as follows :

	Rs.		Rs.
Share capital		Land and building	2,00,000
Authorised :		Stock	1,00,000
50,000 shares of Rs. 10 each	5,00,000	Debtors	90,000
		Balance at bank	2,50,000
Subscribed and paid-up :			
30,000 shares of Rs. 10 each	3,00,000		
Profit and loss account	1,40,000		
6% Debentures	1,00,000		
Creditors	70,000		
Proposed dividend	30,000		
Rs.	6,40,000	Rs.	6,40,000

At the annual general meeting of the company held on 1st April 1970, the following resolutions were passed : (*i*) To pay a dividend in cash of 10 per cent for the year, 1969 ; (*ii*) To issue one fully paid bonus share for every five shares held ; (*iii*) To give existing shareholders the option to purchase one Rs. 10 share at Rs. 15 for every five shares held prior to the bonus distribution, this option being taken up by all the shareholders ; (*iv*) To repay the debentures at a premium of 5 per cent

Pass the necessary journal entries to record the above transactions and prepare the balance sheet. [B. Com. (Hons), Delhi 1971]

24 The following balances appeared in the books of Parasuram Flour Mills, Ltd., as on 31st December 1971 :

	Rs.		Rs.
Stock of wheat	9,500	Furniture	5,100
Stock of flour	16,000	Vehicles	5,100
Wheat purchases	4,05,000	Stores and spare parts	18,300
Manufacturing expenses	90,000	Advances	24,500
Flour sales	5,55,000	Book debts	51,700
Salaries and wages	13,000	Investments	4,000
Establishment	4,700	Share capital	72,000
Interest (*Cr*)	500	Pension fund	23,000
Rent received	800	Dividend equalisation fund	10,000
Profit and loss account (*Cr.*)	15,000	Taxation provision	8,500
Directors' fees	1,200	Unclaimed dividends	900
Dividend for 1970	9,000	Deposits (*Cr*)	1,600
Land	12,000	Trade creditors	1,24,000
Buildings	50,500	Cash in hand	1,200
Plant and machinery	50,500	Cash at bank	40,000

Prepare the company's tradin[illegible] year and balance sheet as on 31st Dec[illegible] ing adjustments into account : (*a*) [illegible] Wheat at cost, Rs. 14,900 : Flour at [illegible] standing expenses : Manufacturing ex[illegible] wages, Rs. 1,200 ; (*c*) Provide depreciation · Building at 2% ; Plant and machinery at 10% : Furniture at 10%, and Vehicles 20%. (*d*) Interest accrued on Government Securities, Rs. 100, (*e*) A tax provision of Rs 8,000 is considered necessary. (*f*) The directors propose a dividend of 20%. (*g*) The authorised capital consists of 12,000 equity shares of Rs. 10 each, of which 7,200 shares were issued and fully paid up.

(B. Com. Kerala, 1973)

[*Gross profit Rs 47,600 ; Net profit Rs 21,310 ; Pr*[illegible] *loss appropriation balance Rs. 13,410 ; Balance* [illegible] *total* [illegible]

25. The following is the trial balance on June 30, 1960, of the Modern Manufacturing Company Ltd.

	Rs.		Rs.
Stock, 30th June, 1959	7,500	Dividend paid, August, 1959	500
Sales	35,000	Interim dividend paid, Feb., 1960	400
Purchases	24,500	Capital—10,000 Re. 1 shares, fully paid	10,000
Productive wages	5,000	Debtors	3,750
Discounts (*Dr.*)	700	Creditors	1,750
Discounts (*Cr.*)	500	Plant and machinery	2,900
Salaries	750	Cash in hand and at bank	1,620
Rent	495	Reserve	1,550
General expenses	1,705	Loan to managing director	325
Profit and loss account. 30th June, 1959 (*Cr.*)	1,503	Bad debts	158

Stock, on 30th June, 1960 Rs. 8,200. You are required to make out the trading account, and profit and loss account for the year ended 30th June, 1960 and the balance sheet as on that date. You are also to make provision in respect of the following: (*i*) Depreciate machinery @ 10% per annum; (*ii*) Reserve 5% discount on debtors; (*iii*) Allow $2\frac{1}{2}$ per cent discount on creditors; (*iv*) Provide managing director's commission, 15% on the net profit, before deducting his commission; (*v*) One month's rent Rs. 45 per mensem was due on 30th June: and (*vi*) Six months' insurance included in general expenses was unexpired at Rs. 75 per annum.

(Delhi B. Com., 1963)

(*Gross profit Rs. 6.200 ; Net profit Rs. 2,083·14 ; Balance Sheet total Rs. 16,355*)

26. The following is the trial balance of Alfa Ltd., for the year ended 30th June, 1977 :

Debits	Rs.	*Credits*	Rs.
Land and buildings	3,00,000	Sundry creditors	40,000
Plant and machinery	4,50,000	Bills payable	20,000
Furniture and fittings	40,000	General reserve	2,00,000
Goodwill	60,000	P & L A/c balance (on 1-7-76)	90,000
Sundry debtors	60,000	Sales	6,25,000
Bills receivable	26,000	Purchase returns	15,000
Investments (5% Govt. securities)	30,000	Equity share capital	5,00,000
Cash in hand	2,000	8% Preference share capital	2,00,000
Cash at banks	55,000		
Preliminary expense	29,000		
Purchases	4,00,000		
Sales returns	10,000		
Stock on 1-7-76	85,000		
Wages	47,000		
Salaries	55,000		
Rent, rates and taxes	9,000		
Carriage inwards	6,500		
Law charges	2,500		
Trade expenses	23,000		
Rs.	16,90,000	Rs.	16,90,000

Prepare the profit and loss account and balance sheet of the company after taking the following particulars into consideration :

(*a*) The authorised capital of the company Rs. 10,00,000 divided into 50,000 equity shares of Rs. 10 each and 5,000 8 per cent preference shares of Rs. 100 each.

(*b*) The original cost of land and building, plant and machinery and furniture and fittings was Rs. 2,50,000, Rs. 6,00,000 and Rs. 60,000 respectively. Additions during the year were : building Rs. 50,000 and plant Rs. 20,000.

(*c*) Depreciation is to be charged on plant and machinery and furniture and fitting at 10 per cent on original cost.

(*d*) Of the sundry debtors, Rs. 10,000 are outstanding for a period exceeding 6 months, Rs. 5,000 are considered doubtful, while the others are considered good.

(*e*) The directors are entitled to a commission at 1 per cent of the net profits before charging such commission.

(*f*) Stock on 30th June, 1977 is Rs. 1,30,000.

(*g*) Provide Rs. 34,800 for income-tax. [I.C.W.A. (Final) Dec, 1977]

(*Gross profit Rs. 2,21,500 ; Net profit Rs. 25,095 ; Balance sheet total Rs. 11,10,500*)

Hint : Provide for interest on investments and depreciation on additions to plant.

27. "Everprosperous Private Limited" prepared the following trial balance for the year ended June 30, 1977 and you are required to prepare the profit and loss account and balance sheet as per the provisions of Companies Act, 1956 after considering the adjustments detailed below :

Debit	Rs	*Credits*	Rs.
Land	1,50,000	Accumulated depreciation :	
Buildings administrative	3,80,000	Buildings—administrative	28,500
Buildings—factory	5,50,000	Buildings—factory	82,500
Plant & machinery	15,25,000	Plant & machinery	4,57,500
Furniture	1,25,000	Furniture	37,500
Raw materials	85,000	Duty drawback and excise refunds	90,000
Packing materials	26,000		
Finished goods	1,30,000	Sales—domestic	64,50,000
Purchases—raw materials	29,50,000	Sales—exports	2,65,000
Purchases—packing materials	1,55,000	Share capital	3,00,000
Salaries & wages	7,52,000	General reserve	7,44,000
Power & fuel	1,25,000	Profit and loss account	15,000
Misc. expenses	35,000	Creditors	3,00,000
Packing and forwarding	69,500		
Export tour expenses	87,500		
Excise duty	7,25,000		
Sundry debtors	3,87,440		
Cash and bank balances	12,560		
Advances to suppliers	3,59,000		
Advertising	68,000		
Commission	46,000		
Travelling and conveyance	27,000		
	Rs. 87,70,000		Rs. 87,70,000

(*a*) Depreciation has been calculated by the straight line method at the following rates :

Buildings—administrative	2·5 per cent
Buildings—factory	5·0 per cent
Plant and machinery	10·0 per cent
Furniture	10·0 per cent

Closing stocks :

Raw materials	Rs 78,000

Packing materials	15,000
Finished goods	1,05,000

(c) Purchases—raw materials includes items of furniture acquired during the year at Rs. 25,000 and Rs. 35,280 as advance for car which was received on July 10, 1977.

(d) Taxation at 50 per cent.

(e) Share capital consists of :

Authorised	Rs.
500—8½% cumulative redeemable preference shares of Rs. 100 each	50,000
6,000—Equity shares of Rs. 100 each	6,00,000
Rs.	6,50,000

Issued, subscribed and paid-up

250—8½% Cumulative redeemable preference shares of Rs. 100 each.

2,750—Equity shares of Rs. 100 each fully paid up.

200—Equity shares and 50—8½% cumulative redeemable preference shares were issued for consideration other than cash.

(f) Directors issued bonus shares to equity shareholders by capitalising general reserves in the ratio of 1 : 1 for which no adjustments were made in books.

(g) Directors proposed dividends on preference shares and on equity shares at 15 per cent and to transfer Rs. 7,00,000 to General Reserve out of current profits.

(h) Sundry debtors include Rs. 39,000 over six month out of which Rs. 1,700 bad debts to be written off.

(i) Cash and bank balances include Rs. 1,360 cash on hand, Rs. 10,000 in fixed deposit and balance in current account with scheduled bank. **(I.C.W.A. (Inter) Dec. 1977)**

[Net profit Rs. 7,88,040 ; Balance sheet total Rs. 29,35,080]

28. The following list of balances of S. P. Ltd. as on 31st March 1977 has been extracted from its books of account. Prepare profit and loss account for the year ended 31st March 1975 and balance sheet as at that date.

Dr.	Rs.	*Cr.*	Rs.
Land and buildings	70,000	Share capital (2,000 shares of Rs. 100 each on which Rs. 50 per share are paid-up)	1,00,000
Furniture and fittings	4,000	General reserve	15,000
Plant and machinery	50,000	8% Debentures	50,000
Stock-in-trade, 31-3-75	64,000	Bank overdraft (unsecured)	2,000
Salaries	4,000	Sundry creditors	8,000
Printing and stationery	600	Share premium	5,000
Debtors (less than 6 months old)	35,000	Debenture redemption reserve	20,000
Trade investment	3,000	Gross profit	52,000
Cash on hand	1,000	Profit and loss account	3,000
Preliminary expenses	2,000		
Bank balance (Scheduled bank)	12,000		
Advance payment of income-tax	4,000		

Interest (Nett)	1,000		
Debenture interest	2,000		
Directors' fees	1,000		
Rent, rates and insurance	1,400		
Total	2,55,000	**Total**	**Rs** 2,55,000

The following information is relevant for the purposes of preparation of final accounts:

(1) Outstanding expenses: Audit fees Rs. 1,000. Interest on debentures for 6 months Rs. 2,000. Provision for tax Rs. 12,000.

(2) Machinery worth Rs. 20,000 was purchased and Installed on 1st October 1974. Provide depreciation on land and buildings at 2½%, on machinery and plant at 10%.

(3) Prepaid insurance Rs. 400.

(4) The directors desire the following appropriations to be made;

(*i*) Rs. 5,000 to be transferred to debenture redemption reserve.

(*ii*) Rs. 2,000 to be transferred to the general reserve.

(*iii*) Dividend on share capital to be proposed at 8%

(5) The authorised share capital of the company consists of 5,000 equity shares of Rs. 100 each.

(6) Write off 50% of the preliminary expenses.

(B. Com., Madras, Sept 1978)

[*Net profit Rs. 20,650 : Balance sheet total Rs. 2,38,650*]

29. Original Traders Ltd., was incorporated with a nominal capital of Rs 5,00,000 composed of equity shares of Rs 10 each. The following trial balance was extracted from the books as on 31st December 1973:

	Dr. Rs.	*Cr.* Rs.
Share capital (fully called up)		3,00,000
Calls in arrear (final call on 300 shares)	900	
Closing stock	75,000	
Gross profit		1,50,000
Sundry debtors and creditors	1,00,750	25,000
Fixed Assets : At cost :		
Furniture	50,000	
Motor car	20,000	
Premises	1,50,000	
Depreciation provision up to 31-12 1972		
Furniture		[illegible]
Motor car		[illegible]
Premises		[illegible]
Salaries	[illegible]	
Printing and stationery	[illegible]	
Postage and telephones	[illegible]	
Motor car expenses	[illegible]	
Investment in shares (at cost)		[illegible]
Dividend		
Payment to auditors		

Director fees	900	
Profit and loss account—balance as on 31-12-1972		19,500
Cash at bank	67,860	
Cash in hand	1,365	
	5,09,375	5,09,375

The following particulars are available :

(1) Market value of investment in shares as on 31-12-1973 Rs. 12,000.

(2) Depreciation to be provided on written-down value : Furniture at 10% ; Motor car at 20% ; premises at 2½%.

(3) Salaries include Rs. 6,000 paid to the Managing Director.

(4) Provisions to be made for ;
Taxation—Rs. 60,000 ; proposed dividends—at 15% ;

(5) Effect has not been given to a Board resolution dated 2-3-1973 forfeiting the shares on which final call was unpaid ;

(6) Payment to auditors include Rs. 100 for taxation work in addition to audit fees.

(7) Sundry debtors include Rs. 50,000 due for a period exceeding six months. This also includes Rs. 750 due from a director.

You are required to draw up the :

(*a*) Profit and loss account for the year ended 31-12-1973.
(*b*) Balance sheet as at 31st December 1973.

(B.Com. Madras, April 1975)

[*Net profit Rs. 1,07,519* ; *Balance sheet total Rs. 4,52,119*]

30. The Calcutta Manufacturing Co, Ltd. was registered with an authorised capital of Rs. 10,00,000 divided into shares of Rs. 10 each, of which 40,000 shares had been issued as fully paid.

The following is the trial balance extracted on 31st December 1969 :

	Rs.		Rs.
Stock (1st January 1969)	1,86,420	Plant and machinery	78,400
Manufacturing wages	1,09,740	Loose tools	12,500
Manufacturing expenses	19,240	Share capital	4,00,000
Purchases	4,21,460	Calls-in-arear	1,000
Machinery repairs	8,610	Rates and electricity (Factory Rs. 14,210 : Office Rs 3,400)	17,610
Carriage inward	4,910		
Carriage outward	9,260	Directors' fees and remuneration	12,000
Advance payment of income-tax	14,290	Office salaries and expenses	13,000
Bank loan (at 5%) (*Cr.*)	50,000	Auditor's fees	1,250
Interest on loan (at 5%)	1,250	Office furniture	5,000
Debtors	1,64,400	Commission	8,640
Creditors	92,220	Returns inward	12,640
Profit and loss account 1st January 1969 (*Cr.*)	8,640	Returns outward	9,810
		Preliminary expenses	6,000
Bank current account	6,860	Transfer fees	40
Cash in hand	1,920	Goodwill	1,50,000
Leasehold Factory	64,210	Sales	7,69,900

You are required to prepare trading and profit and loss account for the year ended 31st December 1969. and a balance sheet at as that date

after taking into consideration th[illegible]
one-th[illegible]
nery a[illegible]
1,890 [illegible] d at Rs 1,24,8[illegible]
[illegible] ebtors for doubt-
[illegible] n debtors ; and
[illegible] year ending 31st
[illegible] 21,000.

[B. Com., (Hons.), Delhi, 1970]

31. The authorised capital of Inter State Distributors Ltd. is Rs. 7,50,000 consisting of 3,000 6% cumulative preference shares of Rs. 100 each. The following is the trial balance drawn up on December 31, 1969 :

	Rs.		Rs.
Paid-up capital :		General expenses	21,[illegible]
3,000 6% cumulative preference shares	3,00,000	Furniture at cost	[illegible]
3,000 equity shares (Rs. 75 per share called up)	2,25,000	Sales	9,[illegible]
		Purchases	4,[illegible]
Goodwill	1,00,000	Bills receivable	6,[illegible]
		Freight and carriage inward	3,[illegible]
5% first mortgage debentures (secured on freehold properties)	2,10,000	Investments : 600 shares of Rs. 100 each in Sunrise Limited	60,000
Trade debtors	1,67,500	Debenture interest (half year to June, 1969)	5,250
Trade creditors	1,23,520		
Freehold properties at cost	3,90,000	Final dividend for 1968	20,450
Stock on 1st January, 1969	2,41,500	Preference dividend (half year to 30th June, 1969)	9,000
General reserve	82,725		
Salaries	1,01,500	Balance at bank in current account	97,500
Profit and loss account (Cr.)	58,500		
Reserve for taxation	8,000	Cash in hand	14,145
Delivery expenses	1,02,000	Shares forfeited account	2,000
Rent and rates	35,250		

(a) The value of stock on December 31, 1969 was Rs. 2,15,000 ; (b) Depreciation on freehold properties is to be provided at 2½% and on furniture at 6% ; (c) The directors propose to pay the second half-year's dividend on preference shares and a 10% dividend on equity shares ; and (d) Shares were forfeited on non-payment of Rs. 35 per share.

You are required to prepare final accounts of the company.

(Adapted from B. Com., Shivaji, Kolhapur, 1971) 35·5

[*Gross profit Rs. 4,11,850 ; Net profit Rs. 1,22,350 ; Profit and loss appropriation account balance Rs. 1,20,100 , Balance sheet total Rs. 11,10,805 , Issued equity capital 2,[illegible]*]

32. The Silver Ore Co. Ltd. was formed on [illegible] with an authorised capital of Rs. 6,00,000 in shares of Rs. [illegible] 52,000 shares had been issued and subscribed [illegible] arrear on 100 shares. From the following trial balance [illegible] 1960, prepare the trading and profit and loss account [illegible] sheet :

	Rs.		
Cash at bank	[illegible]	[illegible]	[illegible]
Share capital	[illegible]	[illegible]	[illegible]
Plant	[illegible]	[illegible]	[illegible]
Sale of silver	[illegible]	[illegible]	[illegible]
Mines	[illegible]	[illegible]	[illegible]
Promotion expenses	[illegible]	[illegible]	[illegible]

Director fees	900	
Profit and loss account—balance as on 31-12-1972		19.500
Cash at bank	67,860	
Cash in hand	1,365	
	5,09,375	5,09,375

The following particulars are available :

(1) Market value of investment in shares as on 31-12-1973 Rs. 12,000.

(2) Depreciation to be provided on written-down value : Furniture at 10% ; Motor car at 20% ; premises at 2½%.

(3) Salaries include Rs. 6,000 paid to the Managing Director.

(4) Provisions to be made for ;
Taxation—Rs. 60,000 ; proposed dividends—at 15% ;

(5) Effect has not been given to a Board resolution dated 2-3-1973 forfeiting the shares on which final call was unpaid ;

(6) Payment to auditors include Rs. 100 for taxation work in addition to audit fees.

(7) Sundry debtors include Rs. 50,000 due for a period exceeding six months. This also includes Rs. 750 due from a director.

You are required to draw up the :

(*a*) Profit and loss account for the year ended 31-12-1973.
(*b*) Balance sheet as at 31st December 1973.

(B.Com. Madras, April 1975)

[*Net profit Rs. 1,07,519 ; Balance sheet total Rs. 4,52,119*]

30. The Calcutta Manufacturing Co, Ltd. was registered with an authorised capital of Rs. 10,00,000 divided into shares of Rs. 10 each, of which 40.000 shares had been issued as fully paid.

The following is the trial balance extracted on 31st December 1969 :

	Rs.		Rs.
Stock (1st January 1969)	1,86,420	Plant and machinery	78,400
Manufacturing wages	1,09,740	Loose tools	12,500
Manufacturing expenses	19,240	Share capital	4,00,000
Purchases	4,21,460	Calls-in-arear	1,000
Machinery repairs	8,610	Rates and electricity (Factory Rs. 14,210 : Office Rs 3,400)	17,610
Carriage inward	4,910		
Carriage outward	9,260	Directors' fees and remuneration	12,000
Advance payment of income-tax	14,290	Office salaries and expenses	13,000
Bank loan (at 5%) (*Cr.*)	50,000	Auditor's fees	1,250
Interest on loan (at 5%)	1,250	Office furniture	5,000
Debtors	1,64,400	Commission	8,640
Creditors	92.220	Returns inward	12,640
Profit and loss account		Returns outward	9,810
1st January 1969 (*Cr.*)	8,640	Preliminary expenses	6,000
Bank current account	6,860	Transfer fees	40
Cash in hand	1,920	Goodwill	1,50,000
Leasehold Factory	64,210	Sales	7,69,900

You are required to prepare trading and profit and loss account for the year ended 31st December 1969. and a balance sheet at as that date

after taking into consideration the following adjustments ; (*i*) Write off one-third prelimi[illegible]
nery at 10%, on [illegible]
1,890 and office s[illegible]
terest on bank loan for 6 months; (*v*) The stock was valued at Rs. 1,24,840 and loose tools at Rs. 10,000 ; (*vi*) Provide Rs 8,500 on debtors for doubtful debts ; [illegible]
(*viii*) The d[illegible]
December [illegible]

[B. Com., (Hons.), Delhi, 1970]

31. The authorised capital of Inter State Distributors Ltd is Rs. 7,50,000 consisting of 3,000 6% cumulative preference shares of Rs. 100 each. The following is the trial balance drawn up on December 31, 1969 :

	Rs.		Rs.
Paid-up capital :		General expenses	21,000
3,000 6% cumulative preference shares	3,00,000	Furniture at cost	75,000
3,000 equity shares (Rs. 75 per share called up)	2,25,000	Sales	9,18,600
Goodwill	1,00,000	Purchases	4,76,500
5% first mortgage debentures (secured on freehold properties)	2,10,000	Bills receivable	6,000
Trade debtors	1,67,500	Freight and carriage inward	3,750
Trade creditors	1,25,520	Investments : 600 shares of Rs. 100 each in Sunrise Limited	60,000
Freehold properties at cost	3,90,000	Debenture interest (half-year to June, 1969)	5,250
Stock on 1st January, 1969	2,41,500	Final dividend for 1968	20,250
General reserve	82,725	Preference dividend (half-year to 30th June, 1969)	9,000
Salaries	1,03,500	Balance at bank in current account	97,500
Profit and loss account (*Cr.*)	58,500	Cash in hand	14,145
Reserve for taxation	8,800	Shares forfeited account	2,000
Delivery expenses	1,02,000		
Rent and rates	38,250		

(*a*) The value of stock on December 31, 1969 was Rs 2,15,000 ; (*b*) Depreciation on freehold properties is to be provided at 2½% and on furniture at 6% ; (*c*) The directors propose to pay the second half-year's dividend on preference shares and a 10% dividend on equity shares ; and (*d*) Shares were forfeited on non-payment of Rs. 35 per share.

You are required to prepare final accounts of the company.

(Adapted from B. Com., Shivaji, Kolhapur, 1971) 30 9

[*Gross profit Rs. 4,11,850 ; Net profit Rs. 1,22,350 ; Profit and loss appropriation account balance Rs. 1,20,100 ; Balance sheet total Rs. 11,10,895 ; Issued equity capital 3,050 shares*]

32. The Silver Ore Co. Ltd was formed on April 1, 1968 with an authorised capital of Rs. 6,00,000 in shares of Rs. 10 each. Of these 52,000 shares had been issued and subscribed but there were calls in arrear on 100 shares. From the following trial balance as on March 31, 1969, prepare the trading and profit and loss account and the balance sheet :

	Rs.		Rs.
Cash at bank	1,05,500	Advertising	[illegible]
Share capital	5,19,750	Cartage on plant	[illegible]
Plant	40,000	Furniture and buildings	[illegible]
Sale of silver	1,79,500	Administrative expenses	[illegible]
Mines	2,20,000	Repairs to plant	[illegible]
Promotion expenses	6,000	Coal and [illegible]	[illegible]

Interest on F.D.—up to Dec. 31	3,900	Cash	530
Dividend on investment	3,200	Investments—	
Royalties paid	10,000	Shares of tin mines	80,000
Railway track and wagons	17,000	Brokerage on above	1,000
Wages of miners	74,220	6% F.D. in Syndicate Bank	89,000

(*i*) Depreciate plant and railways by 10% ; furniture and building by 5% ; (*ii*) Write off a third of the promotion expenses ; (*iii*) Value of silver ore on March 31, 1969 Rs. 15,000, The directors forfeited on Dec. 20, 1968, 100 shares on which only Rs. 7·50 had been paid.

(B. Com., Mysore 1971-72) **30·10**

[*Gross profit Rs. 97,900 ; Net profit Rs. 70,398 ; Balance sheet total Rs. 5,90,148*]

33. An inexperienced accountant prepared the following trial balance of Bang Vikas Ltd., for the year ending 31-12-1971. The cash in hand on 31-12-1971 was Rs. 750.

Debit balances	Rs.	*Credit balances*	Rs.
Depreciation on machine	33,000	Authorised capital : 60,000 shares	
Calls in arrear	7,500	of Rs. 10 each	6,00,000
Land and buildings	3,00,000		
Machinery	2,97,000	Subscribed capital	4,00,000
Interim dividend paid	37,500	6% debentures	3,00,000
Stock on 1-1-71	75,000	Profit and loss account (*Cr.*)	13,625
Sundry creditors	40,000	Sundry debtors	87,000
Bills payable	38,000	Sales	4,15,000
Furniture	7,200	Sinking fund	75,000
Bank balance	39,900	Preliminary expenses	5,000
Purchases	1,85,000		
Provision for bad debts	4,375		
Investments	75,000		
Salary and wages	99,300		
Repairs	4,300		
Fuel	2,500		
Rates and taxes	1,800		
Travelling expenses	2,000		
Discounts	6,400		
Directors' fees	5,700		
Bad debts	2,100		
Debenture interest	9,000		
Carriage	1,800		
Freight	8,900		
Sundry expenses	2,350		
Public deposits	10,000		
	Rs. 12,95,625		Rs. 12,95,625

After locating the mistakes and making the following adjustments prepare trading and profit and loss account and balance sheet in the prescribed form.

Adjustments : (*i*) Stock on 31-12-1971 Rs. 95,000, and (*ii*) Write off preliminary expenses.

Note : Rectified trial balance need not be prepared.

(B. Com., Saurashtra, 1972, Modified) **30·11**

[*Gross profit Rs. 2,36,800 ; Net profit Rs. 60,475 ; Balance of profit and loss appropriation account Rs. 36,600 : Balance sheet Rs. 9,01,100 ; Difference in trial balance Rs. 750*]

34. The trial balance of the Maharashtra Trading Co. Ltd. for the year ending December 31, 1971 is given below. Prepare profit and loss account and balance sheet after making the following adjustment: (*i*) Add Rs. 1,000 to sinking fund for redemption of debentures; and (*ii*) Provide for a half-year's debenture interest.

Debit balances	Rs.		Rs.
		Cash in hand	570
Calls-in-arrear	500	Cash at bank	8,800
Buildings	20,000	Material consumed	74,580
Machinery	22,000	Interest out of capital (during construction period)	800
Interim dividend paid (August 1, 1971)	2,500	Discount allowed	2,020
Stock (December 31, 1971)	8,075	Directors fees	420
Office furniture	525	Bad debts	250
Patterns	5,150	Debenture interest paid (July 1, 1971) (Less tax at 30%)	280
Patents	4,000		
Sundry debtors	27,700		
Sinking fund investment	5,000	Balance of profit and loss account last year	2,140
Manufacturing wages	29,500	Unsecured loan	9,000
Repairs	1,200	Sundry creditors	17,700
Coal, gas and water	2,500	Sales	1,23,500
Rent and taxes	1,750	Profit on block sold	1,180
Salaries	2,125	Sinking fund for redemption of debentures	5,000
Travelling expenses	1,075	Development rebate reserve	1,250
Credit balances:		Share premium	350
Authorised capital	60,000	Interest on sinking fund investment	200
Subscribed and fully called capital	40,000		
Debentures, 4 per cent	20,000	Outstanding expenses	1,000

Profit on block sold was, u/s 349 of the Companies Act, 1956, Rs. 1,000. Final dividend at 6.25% on shares was proposed by the board of directors. (B. Com., Marathwada 1972, Modified) 30.12

[*Gross profit Rs. 16,920*; *Net profit Rs. 8,280*; *Balance of profit and loss appropriation account Rs. 4,420*; *Balance sheet total Rs. 1,02,620*]

[Hints. 1. Interest paid out of capital is a deferred expenditure.

2. Profit on block sold in excess that permitted u/s 349 is a profit of capital nature]

35. The Allied Traders Ltd, Bombay, have an authorised and subscribed capital of Rs. 8,00,000 divided into 8,000 equity shares of Rs. 100 each. From the following balances which appear in the books of the company as on 31-12-1970, prepare (*a*) Profit and loss account; (*b*) Profit and loss appropriation account for the year ended on 31-12-1970, and (*c*) balance sheet as on that date, in the form prescribed under the Companies Act.

	Rs.		Rs.
Share capital	8,00,000	Reserve fund	60,000
Land and buildings	3,60,000	Profit and loss account (1-1-70) (Cr.)	35,200
Plant and machinery	6,62,400	Purchases	9,60,000
Loose tools	37,600	Returns outward	20,000
Preliminary expenses	19,600	Sales	12,31,200
Furniture	14,400	Returns inward	28,000
Calls-in-arrear	6,000	Advertisement	10,160
Cash in hand	2,000		

5% Govt. Bonds (tax-free) (Face value Rs. 40,000)	39,520	Audit fees	4,000
Bills receivable	54,400	Carriage	14,800
Goodwill	64,000	Wages	92,800
Motor vehicles	12,000	Insurance	19,600
Sundry debtors	83,200	Stock (1-1-70)	1,90,400
Interim dividend	18,000	General expenses	17,200
Repairs	3,440	6% debentures	4,00,000
Sundry creditors	1,22,400	Bank overdraft	53,120
		Debenture interest (less tax at 30%)	8,400

You are required to consider the following adjustments : (1) Stock as on 31-12-1970 Rs. 1,76,800 ; (2) Create reserve for bad bebts at 5% on sundry debtors ; (3) Provide depreciation : Plant and machinery @ 5% ; furniture @ 7½% ; loose tools @ 15% ; Motor vehicles @ 20% p.a. ; (4) Prepaid insurance Rs. 1,600 ; (5) Reserve fund to be increased by Rs. 1,00,000 ; (6) Directors declared on 15-8-1970 an interim dividend for six months ending June 30, 1970 @ 3% ; (7) Wages outstanding Rs. 2,400 ; and (8) Interest on debentures for 6 months.

(B. Com., Poona, 1971, Modified) 30·13

[Gross profit Rs. 1,39,600 ; Net profit Rs. 18,400 ; Balance of profit and loss appropriation account Rs. 19,600 ; Balance sheet total Rs. 14,83,120 ; Tax outstanding Rs. 13,200]

36. The following balances have been extracted from the books of Pioneer Traders Ltd as on September 30, 1971 :

	Rs.		Rs.
Share capital (authorised and issued) :		Creditors	25,600
Equity (1,50,000 shares)	15,00,000	Profit and loss (as on 30-9-70) (*Cr*.)	10,000
8% Redeemable preference		Interim dividend	76,600
(400 shares)	40,000	Unpaid dividend	2,000
Share premium	25,000	Other current assets	5,70,000
General reserve	1,00,000	Investments	2,00,000
Preference share redemption	48,000	Outstanding expenses	6,000
Block capital	9,55,000	Income-tax paid under dispute (year ending 30-9-70)	1,00,000
Trading profit—Net profit before tax	4,21,000	Provision for taxation (30-9-70)	70,000
Debtors	30,000	Advance payment of income-tax	2,20,000

Additional information: (1) Profit was calculated after charging Rs. 18,000 paid to managing director as minimum remuneration He is to be given as remuneration 5% of the net profits subject to the above minimum. (2) Preference shares were redeemed on April 1, 1971, at a premium of 20% but no entries were passed for giving effect thereto except payment standing to the debit of preference share redemption account ; (3) Income-tax demand for the year ended September 30, 1970 of Rs. 1,00,000 has not been provided in full, against which an appeal is pending ; (4) Income-tax to be provided at 55%.

You are required to prepare profit and loss adjustment account and balance sheet. **(C.A. Inter, 1971, Modified) 30·14**

[Managing director's total remuneration Rs. 21,950 ; Net profit after managing director's remuneration Rs. 4,17,050 ; Net profit after tax Rs. 1,87,672 ; Balance sheet total Rs. 17,85,000]

37. The following balances have been extracted from the books of Eastern Printing and Publishing House Ltd, as on 31st March 1974 :

Debit balances	Rs.	*Credit balances*	Rs.
Plant and machinery (cost less depreciation)	85,000	Sales	5,80,000
Furniture and fixtures (cost less depreciation)	12,000	Share capital	3,00 000
Motor car (cost less depreciation)	15,000	Development rebate reserve	17,250
Opening stock	1,35,000	Creditors for goods	45,000
Purchases	1,00,000	Term loan from bank	1,00,000
Publication expenses	2 00,000	Liabilities for expenses	25,000
Royalties to authors	25,000	Provision for taxation (year ended 31st March, 1973)	80,000
Wages	40,000	Miscellaneous receipts	8,300
Calls, in-arrear	2,000	Profit and loss app. a/c	5,250
Power	3,500		
Debtors	1,20,000		
Advance payment of income-tax :			
(*i*) Year ended 31st March 1973	75,000		
(*ii*) Year ended 31st March 1974	1,10,000		
Goodwill	25,000		
Establishment	45,000		
Rent and taxes	12,000		
Postage and telegram	2,000		
Motor car expenses	6,000		
Travelling and conveyance	4,500		
Electric charges	600		
Advertisement	6,600		
Directors' fees	900		
Managing director's minimum remuneration	6,000		
Depreciation	20,083		
Interest and bank charges	10,000		
Audit	2,500		
Cash in hand	2,117		
Cash at bank	95,000		
	Rs. 11,60,800		Rs. 11,60,800

The following further particulars are available :

1. Closing stock Rs. 1,60,000.

2. Managing Director is entitled to a remuneration of 5% on the net profits subject to a minimum remuneration of Rs. 6,000 to be drawn in equal monthly instalments.

3. Royalties to Authors include Rs. 5,000 paid in advance.

4. Share capital of Rs. 3,00,000 is represented by 1,000 9% cum-pref. shares of Rs. 100 each fully paid up and the balance by equity shares of Rs. 10 each fully called up.

5. Term loan from bank is secured by hypothecation of fixed assets of the company.

6. No effect has been given to the board resolution passed on 15th September, 1973 forfeiting 400 equity shares for non-payment of final call of Rs. 5 per share.

6. Income tax assessment for the year ended 31st March, 1973 has been completed on 26th February, 1974, for a gross demand of Rs. 76,000 and the amount of demand remained unpaid on 31st March 1974.

8. 5,000 of the equity shares were issued for consideration other than cash as fully-paid.

9. Liabilities for expenses include interests accured ar
Term loan

10. Profit and loss app. A/c balance has been arrived at as follows :

Balance from last year	Rs. 7,500
Less : Development rebate reserve created for the year	2,250
	Rs. 5,250

11. Provision for taxation to be made for Rs. 75,000, for the current year.

12. Plant and machinery includes cost of new plant installed during the year Rs. 20,000.

13. Preference dividends are in arrears for three years including the current year.

14. No proposal has been made by the directors for dividend on either class of shares.

15. Depreciation charged up-to-date on the different assets is as follows :

(*i*) Plant and machinery	Rs. 55,000
(*ii*) Furniture and fixtures	4,500
(*iii*) Motor car	9,800

16. Of the debtors Rs. 35,000 is due for more than six months.

You are required to prepare the profit and loss account for the year ended 31st March, 1974 and the balance sheet on that date on the basis of the above information and taking into account the adjustments not made so far. No journal entries are required. Ignore last year's figures.

(C.A. Inter. Nov., 1974)

(*Net profit Rs. 57,637 ; Balance sheet total Rs. 6,29,177 ; Managing director's remuneration Rs. 6,980*)

38. From the following information you are required to prepare :

(*a*) The balance sheet of *X Y* Limited, a public company, as on December 31, 1970; (*b*) Statement showing how the profit and loss account balance has been computed ; (*c*) Statement how depreciation has been calculated.

X Y Limited has an authorised capital of 5,000 8% cumulative preference shares of Rs. 10 each and 20,000 Equity shares of Rs. 10 each. The trial balance as on December 31, 1970, was as follows :

	Rs.		Rs.
8% cumulative preference shares	50,000	Investments at cost :	
Equity shares fully paid	1,00,000	Quoted (market value Rs. 22,000)	20,500
Share premium	5,000	Unquoted (director's valuation Rs. 13,600)	12,500
Buildings	40,000	Tax reserve certificates	25,000
Plant	65,000	Plant replacement reserve	12,000
Vehicles	8,000	Stock	52,000
Doubtful debts provision	3,500	Profit and loss account, balance Jan. 1 (*Cr.*)	6,000
Patents at cost (Rs. 10,000) *less* accounts written off	9,000	Profit for the year (*Cr.*)	47,000
Debtors	36,000	Bank overdraft	7,500
Creditors	19,000		
Corporation tax on 1969 profit (*Cr.*)	18,000		

Further information is given below: (1) The plant scrapped was purchased on 1st January, 1966 for Rs. 2,000 and the vehicles sold on March, 31, 1970 cost Rs. 10,666 on January 1, 1967; (2) The building, plant and vehicles accounts are made up as under:

		Buildings	Plants	Vehicles
1970		Rs.	Rs.	Rs.
January 1	To cost	45 000	87,212	23,500
December 31	To addition at cost	5,000	18,000	3,000
	Rs.	50,000	1,05,212	26,500

		Buildings	Plants	Vehicles
1970		Rs.	Rs.	Rs.
January 1,	By depreciation	10,000	39,000	13,500
December 31,	By proceeds of sale			5,000
	By profit and loss account, book value of plant scrapped	—	1,212	—
1970				
December 31,	By balance	40,000	65,000	8,000
	Rs.	50.000	1,05,212	26,500

(3) The corporation tax assessment for 1969 has been agreed at 17,300;

(4) The following provisions and appropriations are to be made:

(*i*) Corporation tax Rs. 21,000; (*ii*) Increased cost of plant replacement Rs. 5,000; (*iii*) Depreciation: Building 2½% on cost; Plant 10% on W.D.V.; and Vehicles 25% on W.D.V.; (*iv*) Preference dividend of 8% and equity dividend of 7%. (I C.W.A., England, 1971) 30·15

[*Balance sheet total Rs. 2,55,125; Profit and loss account balance Rs. 7,325*]

39. From the following information you are required to prepare profit and loss account for the year ended on December 31, 1969 and balance sheet as on that date in accordance with the requirements of the *Companies Act, 1956.*

AB Limited
TRIAL BALANCE
As on December, 31, 1969

	Rs		Rs
Land at cost	55,000	Equity share capital:	
Building at cost	2,30,000	authorised and issued:	
Plant and machinery at cost	4,30,000	40,000 equity shares of Rs. 10	
Debtors (including Rs. 3,20,000 trade)	3,55,000	each fully paid	4,00,000
		Debenture redemption reserve	60,000
Stock and work-in-progress	5,35,000	Capital reserve	2,1[illegible]
Trade investments	70,000	Retained profits	1,[illegible]
Interim dividend	16,000	Rs. 3,00,000 8% debentures	
Cash at bank	6,800	1963-78 (redeemable	
Royalties	5,000	at Rs 30,000 per annum)	[illegible]
Debenture interest	19,200	Tax equalisation reserve	[illegible]

To Reserve for Bad and doubtful debts	17,500		
To Provision for Income Tax	2,40,000		
To Proposed dividend	1,00,000		
To Balance c/d	3,04,000		
	10,60,000		10,60,000

Depreciation as per Income-tax rules amounts to Rs. 81,000. Calculate the remuneration payable to the manager. [A.C.S. (Inter) Dec. 1980]

(*Profits for managerial remuneration Rs. 6,82,500 ; Commission works out to Rs. 6,460 ; Salary and commission must be restricted to 5/105 of Rs. 6,82,500, i.e., Rs. 32,500*)

42. Hind company Limited was registered with an authorised share capital of Rs. 5,00,000 dividend into 15,000 7 per cent preference shares of Rs 10 each and 70,000 equity shares of Rs. 5 each. On 31st December, 1967, the Trial Balance of the company's books was as follows :

TRIAL BALANCE
31st December 1967

	Dr.	Cr.
Amount received on 15,000 Pre-shares (fully paid)		1,50,000
Amount received on 70,000 Equity shares (fully called)		3,40,000
Purchases and sales	10,70,000	12,40,000
Sales and purchases Returns	15,000	12,000
Sales Ledger Balances	92,000	300
Bought Ledger Balances	200	60,000
Carriage on purchases	1,200	
Carriage on sales	7,800	
Goodwill	1,25,000	
Land and building at cost	2,50,000	
Depreciation on building to 1-1-1967		20,000
Stock : 1-1-1967	2,40,000	
7 per cent debentures		1,00,000
Furniture and Fittings at cost	25,000	
Depreciation on furniture and fittings to 1-1-67		5,000
Warehouse wages	30,000	
Motor vans at cost	60,000	
Depreciation on motor vans to 1-1-67		23,400
Motor van expenses	3,000	
Provision for bad debts		4,500
Rates and Insurance	19,000	
Salaries	25,000	
General office expenses	28,000	
Rent of premises let		3,000
Debenture interest to 30-6-1967	3,500	
Directors' fees	3,400	
Profit on consignment		8,000
Discounts allowed and received	5,000	6,000

Legal charges		2,000	
Provision for Income-tax			20,000
Preliminary expenses		5,000	
Bank balance (scheduled)			21,400
Profit and loss account balance 1-1-1967		3,500	
	Total	Rs. 20,13,600	20,13,600

You are required to prepare Trading and Profit and Loss Account for the year ending 31st December 1967, and balance sheet as on that date *taking the following into consideration.*

(*a*) Depreciation for the year to be provided—building Rs. 5,000 and fixtures and furniture 10 per cent on cost.

(*b*) The balance on the Motor Vans Account on 1st January 1967, is made up as Van *A* Rs. 10,500 ,and others Rs. 39,900. Depreciation van *A* Rs. 5,700 and others Rs. 17,700 Van *A* was sold on 30th June 1 67, for 8,400 and replaced on 1st October 1967, with a new Van costing Rs. 18,000. Depreciation is to be provided at 20 per cent on the written down value (reducing balance method) for the period in use and the profit, if any, arising from sale of van is to be credited to revenue.

(*c*) Stock on 31st December 1967, Rs. 2,13,140.

(*d*) Provision to be made for bad debts equal to 5 per cent of the amount owing from the customers.

(*e*) A new outhouse was constructed during the year for which (*i*) wages included in general office expenses and (*ii*) materials inadvertently included in purchases amounted to Rs. 2,500 and Rs. 4,500 respectively

(*f*) Insurance paid in advance amounted to Rs. 500 and rates paid in advance to Rs. 4,500.

(*g*) Audit fee outstanding Rs. 2,500.

(*h*) The Manager is entitled in addition to his salary to a commission of 5 per cent on the profits after that commission has been charged.

Ignore provision for dividends, and income-tax. Give clearly workings in respect of items (*b*) (*d*) (*e*) and (*h*).

(I.C.W.A. Inter, July 1968)

(*Gross profit Rs. 1,43,440 ; Net profit Rs. 20,780 ; Balance sheet total Rs. 7,20,100 ; Profit on sale of motor van Rs. 4,080 ; Manager's commission Rs. 1,040*)

43. The following balances have been extracted from the books of Arts and Crafts Limited as on 31st March, 1972 :

	Rs		[illegible]
Freehold land	2,00,000	Income from investments	[illegible]
Buildings	75,000	*Provision for doubtful debts*	[illegible]
Furniture	20,000	(1st April 1971)	[illegible]
Debtors	50,000	Creditors	
Stock 31st March 1972	40,000	Provision for depreciation	
Cash at bank	5,000	31st April 1971 :	

Cash in hand	1,000	Building	9,000
Cost of goods sold	3,00,000	Furniture	4,000
Salaries and wages	15,000	Suspense	2,500
Miscellaneous expenses	8,000	Equity share capital	1,67,500
Investments in shares	1,80,000	6 per cent cum. pref. share capital	80,000
Interest	3,000	Share premium	10,000
Bad debts	1,000	Bank overdraft	50,000
Repairs and maintenance	1,500	Sales	3,50,000
Advance Payment of Income-tax	6,000	Profit and loss account 1st April 1971	2,500
	Rs. 9,05,500		Rs. 9,05,500

The following further particulars are available :

1. The land was revalued on 1st January, 1972 at Rs. 3,00,000 by an expert valuer but no effect has been given in the books although the directors have decided to adjust the revalued amount.

2. Provision for doubtful debts is to be adjusted to 5 per cent on the amount of debtors.

3. Equity share capital is composed of Rs. 10 shares, 36,400 fully paid and 500 on which final call of Rs. 3 remains unpaid.

4. Suspense amount represents money received from the new allottee for re-issue of 500 shares forfeited during the year for non-payment of the final call, but no entry for adjustment thereof has been passed.

5. Provision for taxation is to be made at 45 per cent.

6. Market value of investments was Rs. 1,85,000 on 31st March 1972.

7. The company is managed by the directors who are entitled to a remuneration calculated at 3 per cent of the annual net profits.

8. Depreciation is to be charged on : (*i*) Buildings at 2 per cent (*ii*) Furniture at 10 per cent.

9. The land and buildings of the company are mortgaged in favour of the bank as security for overdraft sanctioned up to a limit of Rs. 2,50,000.

10. Dividends on cum. pref. shares were in arrear for 5 years up to 31st March, 1972. The Directors have recommended payment of dividend for two years.

You are required to prepare the profit and loss account for the year ended 31st March, 1972 and a balance sheet as on that date after making such assumptions as may be considered necessary. Ignore previous year's figures.

(C. A. Inter., 1972)

(*Director's remuneration Rs. 600 ; Provision for taxation Rs. 8,730 ; Net profit after tax provision Rs. 10,670 ; Balance sheet total Rs. 6,62,500, profit on re-issue of forfeited shares Rs. 1,000*)

Notes : 1. Income from investments has not been grossed up.

2. Profit on revaluation of land has been shown under capital reserve account.

44. From the information given you are required to prepare:

(*a*) The profit and loss account of AB Limited for the year ende[illegible] 31st December, 1968, and balance sheet at that date in accordance wit[illegible] the Companies Act, 1956, with the necessary note provided to includ[illegible] *movement of reserves*;

(*b*) Statement showing how the pre-tax trading profit was calculate[illegible]

AB Limited had an authorised capital of Rs. 12,00,000 in ordinar[illegible] shares of Rs. 10 each of which 90,000 were issued and fully paid and R[illegible] 5,00,000 in 6% cumulative redeemable preference shares, issued and full[illegible] paid.

The trial balance at 31st December, 1968, is set out below:

	Rs.		Rs.
Ordinary share capital	9,00,000	Sales	44,95,900
6% cumulative preference share capital	5,00,000	Cost of goods sold	32,53,900
		Wages and salaries	3,20,400
Share premium	1,32,000	Rates, repairs and maintenance	2,60,300
Capital reserve	7,50,600	Other expenses	38,400
Retained profits, 1st Jan. 1968	6,05,000	Directors-emoluments	15,800
8% Debentures (interest payable) 30th June and 31st December)	5,00,000	Income from quoted investments	9,500
Freehold properties	28,57,000	Income from unquoted investments	3,200
Fixtures and fittings	3,03,000	Interest on debentures	40,000
Stocks	8,26,900	Preference dividend	30,000
Debtors	3,55,300	Provision for doubtful debts 1st January 1968	46,100
Hire purchase and other instalment debts	12,50,200	Provision for depreciation:	
Provision for unearned charges	1,27,400	Properties 1st January, 1968	[illegible]
Investments quoted at cost	1,80,400	Fixtures 1st January, 1968	[illegible]
Unquoted at cost	60,100	Suspense account	[illegible]
Cash at bank and in hand	1,85,300	Provision for obsolete stock 1st January 1968	[illegible]
Creditors	7,81,000		
Taxation (*Cr.*)	2,87,000		

You are informed that:

(1) On 31st December, 1968, the [illegible] shares were redeemed at 102, and payment was to be made [illegible] 1969. In addition there was a bonus issue [illegible] the basis of one new share for every [illegible] in the books of account.

(2) The freehold properties were [illegible] 35,00,000 from which date depreciation [illegible] 2% per annum but the revaluation [illegible]

(3) The balance on suspense account [illegible]

Proceeds of the sale of a [illegible] July, 1968, which had [illegible] Rs. [illegible]
Proceeds of [illegible]
issue of Rs. 5,00,000 [illegible]

(4) The taxation balance was made up of Rs. 60,000 being tax equalisation reserve and Rs. 2,27,000 being the Corporation tax on the profits for the year ended 31st December, 1967, which have since been agreed at Rs. 2,20.000.

(5) The following provisions are to be made : (*i*) Auditor's remuneration Rs. 2,500 ; (*ii*) Directors' fees Rs. 6,000 ; (*iii*) Doubtful debts Rs. 11,000 ; (*iv*) Obsolete stock Rs. 8,700 ; (*v*) Corporation tax on the 1968 profits Rs 2,15,000 (the tax equalisation reserve is unchanged), (*vi*) Depreciation on fixtures and fittings Rs. 16,200 : (*vii*) Dividend on ordinary shares (pre-bonus issue) of 15%.

(6) The market value of the quoted investments at 31st December 1968, was Rs. 1,96,000 and the director's valuations of the unquoted was Rs. 57,000.

(7) Capital expenditure commitments at 31st December, 1968, were : Contracts placed with suppliers Rs. 27,000 ; Authorised but not committed Rs. 32,000 ; Total Rs. 59,000.

(C.W.A. Part III, England, 1969, Modified)

[*Profit before taxation Rs. 5,01,400 ; Profit after taxation Rs. 2,93,400 ; Balance sheet total Rs. 61,50,500*]

[Hints : (*i*) Debentures Rs. 6,25,000 ; (*ii*) Revaluation profits Rs 10,70,000 have been credited to capital reserve account ; (*iii*) Paid-up capital consists of only ordinary shares following the redemption of preference shares ; (*iv*) Position of various reserves is as under :

	Share premium account	Capital reserve	Capital redemption reserve account	Revenue reserves	Total
	Rs.	Rs.	Rs.	Rs.	Rs.
Balance on 1st Jan. 1968	1,32,000	7,50,600	—	6,05,000	14,87,600
Revaluation of freehold properties	—	10,70,000	—	—	10,70,000
Profit on sale of property	—	20,000	—	—	20,000
Retained profit of the year	—	—	—	1,28,400	1,28,400
Applied to :					
Redemption of preference shares	—	—	5,00,000	(5,00,000)	—
Premium on redemption	(10,000)	—	—	—	(10,000)
Issue of bonus shares	(1,22,000)	(1,78,000)	—	—	(3,00,000)
Balance at Dec. 31, 1968	—	16,62,600	5,00,000	2,33,400	23,96,000

45. AB Limited has an authorised share capital of Rs. 30,00,000 made up of Rs. 1,00,000 6% cumulative preference shares of Rs. 10 each and Rs. 2,00,000 ordinary shares of Rs. 10 each.

The trial balance on 30th June, 1968 was as follows :

	Rs.		Rs.
6% Cumulative preference shares of Rs. 10 each fully paid	5,00,000	Trade investments at cost	1,97,600
		Quoted investments at cost	2,08,000

Ordinary shares of Rs. 10 each fully paid	10,00,000	Stocks 1st July, 1967	1,93,400
Share premium	1,00,000	Work-in-progress 1st July, 1967	6,74,200
General reserve	4,00,000	Trade debtors	8,70,600
8% Mortgage debentures secured on freehold land and buildings (issued 1st July, 1967 with interest payable 30th September and 31st March)	7,00,000	Cash in hand	11,200
Bank overdraft	1,82,000	Preliminary expenses	7,500
Creditors	2,80,900	Discount on debentures	16,000
Preference dividend (*Cr.*)	30,000	Provision for doubtful debts	4,700
Goodwill, patents and trade marks	50,000	Profit and loss account 1st July, 1967 (*Cr.*)	1,35,000
Interim dividend	40,000	Corporation tax, year to 30th June, 1967 (*Cr.*)	1,72,000
Freehold land	9,25,000	Debenture interest	42,000
Freehold buildings	4,20,000	Sales less returns	47,56,000
Plant and machinery	6,37,000	Overhead expenditure	15,06,500
Office furniture and fixtures	87,500	Direct material purchases	18,94,800
Depreciation on building (*Cr.*)	55,000	Advertising	64,000
Depreciation on plant and machinery (*Cr.*)	2,93,000	Bank interest	7,600
Depreciation on office furniture (*Cr.*)	19,400	Subscription and donations	5,700
		Directors' fees	4,000
		Direct labour	7,11,900
		Loans to employees	27,000
		Income from trade investments	21,200
		Income from quoted investments	17,300

You are informed that :

1. The following provisions have to be made : (*a*) depreciation of [illegible]

2. Stocks on 30th June, 1968, were valued at Rs. 2,25,000.

3. Work-in-progress on 30th June, 1968, stood at Rs. 17,48,700 against which progress claims of Rs. 11,20,000 had been invoiced to customers and included in the sales figure.

4. *On 30th June, 1968 the company's land was professionally valued* at (the new value to be brought into the account) Rs. 15,00,000.

5. Corporation tax liability for the year ended 30th June, 1967 had been agreed at Rs. 1,63,000.

6. Preliminary expenses and discount on debentures to be written off against profits.

7. Loans to employees include one to a director of Rs. 12,000.

8. Overhead expenditure includes remuneration : (*i*) directors Rs. 17,000 (*ii*) chairman Rs. 10,000.

9. The directors are recommending a final dividend of 9% ordinary shares and propose to transfer Rs. 1,00,000 to general res

You are required to prepare: Profit and loss account for the year ended 30th June, 1968 and a balance sheet as on that date in accordance with the requirements of the Companies Act.

(C.W.A. England, Part III, 1968 ; Modified)

[Profit before taxation Rs. 4.29,750 ; Profit after tax Rs. 2,47,750 ; Profit carried forward to the balance sheet Rs. 1,08,250 ; Balance sheet total Rs. 19,50,000]

46. AB Limited, a manufacturing company, had an authorised capital of 15,000 6% cumulative preference shares of Rs. 10 each and 75,000 ordinary shares of Rs. 10 each.

The trial balance on 31st December, 1968 was as follows :

	Rs.		Rs.
Ordinary share capital : 50,000 shares of Rs. 10 each fully paid	5,00,000	Payments on account of work-in-progress (*Cr.*)	2,26,000
6% Cumulative preference share capital 10,000 shares of Rs. 10 each fully paid	1,00,000	Debtors	6,92,500
7% Convertible loan stock 1968-70 (*Cr*)	1,00,000	Provision for doubtful debts	29,000
Share premium	60,000	Corporation tax, year to 31st December, 1967 (*Cr.*)	86,000
General reserve	3,10,000	Creditors	2,18,000
Profit and loss account, balance 1st January, 1968 (*Cr.*)	1,45,000	Cash in hand	7,400
Freehold property at cost	4,10,000	Bank overdraft	4,75,700
Plant and machinery at cost	5,96,000	Profit on trading, year to 31st December, 1968	4,22,600
Goodwill, patents and trade marks	65,000	Investments (quoted) at cost	1,15,000
Depreciation, balance 1st Jan. 1968 (*Cr.*) :		Investments (unquoted) at cost	82,000
Freehold property	65,000	Dividends (quoted)	5,200
Plant and machinery	2,47,000	Dividends (unquoted)	13,000
Stocks	1,69,600	Subscriptions and donations	6,500
Work-in-progress	7,43,000	Directors' remuneration	16,000
		Advertising	22,000
		Bank interest	39,500
		Loan interest	7,000
		Preference dividend	6,000
		Interim dividend @ 5 per cent	25,000

You are informed that :

1. Each Rs. 10 7% convertible loan stock can be converted into ordinary shares on the following dates: 31st December, 1968 at Rs. 15·00, 1969 at Rs. 16·25 ; 1970 at Rs. 17·50. On 31st December, 1968 holders of Rs. 30,000 of the loan stock had exercised the option but no entries had been made in the books to cover the conversion. The new ordinary shares do not rank for a dividend out of the 1968 profits.

2. On 31st December, 1968 the freehold property was valued at Rs. 5,20,000 and the new value is to be taken into the balance sheet on that date.

3. Turnover for the year was Rs. 31,00,000.

4. The following provisions have to be made : (i) depreciation on plant and machinery Rs. 62,000, (ii) auditors' remuneration, (including taxation charges of Rs. 240 and expenses Rs. 360) Rs. 2,100, (iii) additional provision for doubtful debts Rs. 7,500. (iv) corporation tax on profits of the year Rs. 1,12,000.

5. Directors' remuneration comprises : (i) Chairman's fees Rs. 3,000, (ii) management remuneration Rs. 9,500, (iii) Fees Rs. 3,500.

6. Corporation tax liability for the year ended 31st December, 1967 has been agreed at Rs. 81,000.

7. Subscriptions and donations comprise : (i) Charitable Rs. 3,420, (ii) Business Rs. 3,080.

8. The directors are recommending a final dividend of 20% on the ordinary shares and a transfer of Rs 50,000 to general reserve.

9. The market value of the quoted investment on 31st December, 1968 is Rs. 1,19,000 and the directors value the unquoted investment at Rs. 1,29,000.

10. Capital expenditure commitment on 31st December, 1968 amounted to Rs. 1,21,000 of which Rs. 47,000 is covered by firm contracts with suppliers.

11. Goodwill, patents and trade marks are to be written down to Rs. 1,000 the reduction to be written off against capital reserve.

(a) Prepare a profit and loss account for the year ended 31st Dec. 1968 and a balance sheet as on that date in accordance with the requirements of the Companies Act together with the relevant notes and additional information required by the Act so far as you are able to do so from the information provided.

Auditors report and comparative figures are not required.

(b) You are advised that the company's bankers are pressing for the overdraft to be reduced and you are asked to comment on the company's liquidity position and suggest ways in which the overdraft could be reduced. (C.W.A. England, Part III, 1969, Modified)

[(i) *Profit before taxation Rs. 2,78,200* ; *Profit after taxation Rs 1,66,200* ; *Balance sheet total Rs. 23,55,000* ; *and* (ii) *The liquidity ratio of the company is less than 1 . 1 and the company is in very insecure position should the bank exercise its right to withdraw overdraft facilities.*]

[*Hints :* Ways in which the overdraft could be reduced include : (a) to induce debtors to settle quickly, (b) to reduce the level of stocks, (c) to speed up the work-in-progress to qualify for more progress payments, (d) to restrict dividends, (e) to issue more shares possibly a "Rights Issue", (f) to negotiate a long-term loan]

SUGGESTED READING

1. *Accountancy*—William Pickles
2. *A Modern Approach to Company Accounts*—John Kellock
3. Lectures on Company Law—Shah
4. *Business Accounting*, Vol. II—F. Wood

6

Neoteric Trends in Published Accounts

Corporate reporting has assumed great importance in recent years not only necessitating the interference of law in the matter of reports to be published by companies but [illegible] tions by progressive companies in the [illegible] It is [illegible] for [illegible] the [illegible] fore, [illegible] the recent trends in such reporting.

As per the provisions of Sections 210, 216 and 217, it is compulsory for the Board of Directors to lay before the company's Annual General Meeting a copy of balance-sheet and profit and loss account together with the directors' and auditors' reports. All these documents together are termed as the annual report of the company. Since all companies print and publish the annual reports, they have acquired another name 'published accounts'. 'Corporate Report' is another popular name for the annual report and is of recent origin.

Objectives of Published Accounts:

The annual report of a company plays an important role in bringing out its salient features and that is why its accurate and attractive presentation cannot be overemphasised. In order to encourage companies to present the picture of the company in the most accurate and the best way, the Institute of Chartered Accountants of India announced in 1959 a prize in the form of a shield to be given to that company which presents its final accounts in the best way.

The annual report gives yearly survey of the operating results and the financial affairs of the company. Directors' report which forms an important part of the annual report comprises usually the following information :

(*a*) A summary of the performance of the company during the year usually comparing it with that of the previous year setting out in detail the production and sales during the year.

(*b*) Information about the products of the company

(*c*) Information regarding the difficulties encountered during the year and the steps taken to overcome the same.

(*d*) The research and development undertaken during the year and the progress made thereof.

(e) Information regarding the important financial operations giving in detail the particulars of capital raised during the year. The sources of and response to such capital issue is also stated.

(f) The diversification and expansion undertaken and achieved during the year.

(g) A summary of the labour-management relations during the year.

(h) The position regarding personnel stating the total number employed, and the training and development activities undertaken.

(i) A general survey of the economic scene and its effect on the working of the company.

(j) Role played by the company in discharging the social obligations such as rural development, provision of welfare facilities for weaker sections etc.

(k) The future prospects of the company in view of the existing position and the available opportunities.

Sachar Committee Recommendations :

Recognising the importance of Directors' Report, the Sachar committee has recommended that it should contain the following additional information :

1. Particulars relating to public deposits.

2. Prosecutions launched against the company and penalties paid. Also particulars of any director being sentenced to imprisonment.

3. Particulars as regards unclaimed and unpaid dividends.

4. Details of investments in other companies, etc., which have not yielded any returns and the reasons therefore.

5. Particulars of any material liability arising after the date of balance sheet but before the adoption of such accounts by directors.

6. Statement showing the commitments and liabilities for which no provision has been made and the reason for not making such provision.

7. Social Report : Activities undertaken to discharge social responsibilities , quantifying wherever possible in monetary terms.

The committee has recommended that every company along with Directors' report shall also give a social report which will indicate and quantify in as precise and clear terms as possible the various activities relating to the social responsibility aspect, which has been carried out by the company in previous years. According to the committee the acceptance of the concept of social responsibility must be reflected in the information and disclosure that the company makes available for the benefit of the various constituents like shareholders, creditors, workers and the community. Openness in corporate affairs is the first principle in securing responsible behaviour.

8. Losses must be indicated separately for divisions dealing with product or group of products.

9. Accounting ratios, *viz.*, ratio of current assets to current liabilities; of inventories to sales; of trade receivable to sales; of [illegible] to net sales and net worth; of return on total capital employed; of [illegible] before interest and tax to total assets: and of net profit [illegible] holders' equity must be presented.

10. Key limiting factors resulting in under-utilisation of [illegible].

11. Number of shares held by each director, if they [illegible] 2% of the total voting rights.

12. Particulars of contracts in which directors [illegible] dependent children have any significant interest.

13. Statement indicating that the statutory [illegible] have been complied with in respect of

(*a*) management appointment and remuneration [illegible]

(*b*) inter-company investments and loans.

Under Section 217(2A) of the Companies Act the [illegible] must disclose the name of every employee [illegible] Rs. 36,000 or more if employed throughout the year [illegible] tion is Rs. 3,000 or more if employed during part of the year [illegible] to the Sachar Committee disclosure of the information [illegible] tion does not seem to have served any purpose. [illegible] will suffice if such information is filed with the [illegible] with the annual return, so that such information [illegible] Government at all times and is open for [illegible] public who might be interested in knowing [illegible] suggested that the company shall be bound to [illegible] shareholder, information regarding all [illegible] in excess of that drawn by managing or whole-time [illegible]

The committee suggested that information [illegible] along with balance sheet shall be limited to—

(*a*) Particulars of Directors and [illegible] tion of not less than three thousand rupees per [illegible] rupees per annum;

(*b*) Particulars of [illegible] that drawn by managing or whole-time [illegible] self or along with his spouse and dependent [illegible] two per cent of equity shares of the company; [illegible]

(*c*) Category-wise statement [illegible] remuneration of less than five [illegible] and one thousand rupees and [illegible] rupees, etc.

Users of Published Accounts

Company's published accounts are of [illegible] shareholders. The other groups who [illegible] accounts can be summarised as follows:

(i) *Creditors* and Customers—present and potential

(ii) Employees and trade union officials

(iii) *Investors*—present and potential

(iv) Debentureholders

(v) *Credit*—Institutions like banks, ICICI, IDBI, UTI, LIC, ICF, etc.

(vi) Stock exchanges

(vii) Economists and investment analysts

(viii) Taxation authorities

(ix) Government and Members of Parliament, the Public Accounts Committee, the Estimates Committee in respect of Government Companies.

Of the above persons some are well conversant with the accounting language and thus are in a position to understand and appreciate the financial statements. The bodies mentioned above are in a position to employ qualified accountants who are in a position to read and interpret the published accounts correctly. But there is no doubt that there is a very large number of persons who are not able to understand and make intelligent use of profit and loss account and balance-sheet. Over and above this, with the development of the corporate sector, emergence of "holding and subsidiary company" structure, considerable advancement in the techniques of accounting to keep pace with the tremendous post-war boom, subsequent industrial expansion, and increasing complexities of taxation, there have come into use various new accounting terms which do not convey any clear meaning to persons other than professsional accountants, financial analysts, and bodies who employ trained persons. Thus the various statements and figures given in the published accounts have come to be viewed with suspicion by the shareholders, creditors and employees.

Thus there is an established case of the need to present published accounts in such a way as will be readily understood by everybody if they are to serve the purpose for which they are meant. The necessity of preparing accounts in an attractive and inviting form and simple language for various persons who are not trained at accounting has led to a difficult situation. Now published accounts are required to fulfil the needs of the statute and the specialist on one hand and persons who are not versed in accounting system and techniques but who are nonetheless vitally interested in the organisation of corporate sector on the other. The solution to this problem lies in supplementing the statutory accounts like balance sheet and profit and loss account prepared according to legal requirements by a non-technical presentation of all significant items as would enable the average shareholder and other persons not versed in accounting to appreciate the financial position and the trading results disclosed by profit and loss accounts. This mixture of the statutory statements prepared in the technical way and voluntary statements of various significant data but in a non-technical way is the modern way of preparing published accounts.

Modern Trends in Published Accounts

With a view to satisfying the needs of persons well-versed in accounting language on one hand and persons not familiar with accounting techniques on the other, it is a common practice to add to the accounts drawn in statutory forms, some voluntary supplementary information in such a manner as would be easily understood by a layman. This voluntary information includes the following :

(a) Balance sheet and profit and loss account in a summarised manner enabling layman to understand the implication :

(b) Summarised presentation of the "highlight" of the information contained in the published accounts ;

(c) Supplementary information ;

(d) Charts; graphs and diagrams ; and

(e) Other matters.

(a) **Summarised accounts.** These are in addition to the balance-sheet and profit and loss account prepared in accordance with the provisions of law. Most of the companies in western countries present these summarised accounts. In our country also many of the companies have taken to publishing these summarised accounts. These summarised accounts usually show the position of the company for the current year and two or more preceding years at a glance. Of late some of the companies are also giving budget estimates of the succeeding year because the preparation of business budgets has assumed great importance. The advantage of the summarised accounts is their clarity and simplicity which will enable even a layman to understand the purport of financial statements. Two illustrations of such summarised accounts taken from the published accounts of Reliance Textile Industries Limited and Bharat Heavy Electricals Limited are reproduced below :

(1) RELIANCE TEXTILE INDUSTRIES LIMITED

Financial Summary :

	(Rs. in Lakhs) 1977-78 (15 Months)	1976-77
Sales	12,367·85	6,872·59
Other Income	198·11	204·78
Total (A)	12,565·96	7,077·37
Materials (Cost of Sales)	8,477·81	4,933·45
Salaries	428·52	228·10
Excise Duty	375·51	209 25
Stores, Dyes & Chemicals	555·34	326·97
Interest	494 91	275·06
Other Expenditure	1,218·77	671·96
Net Loss on Export of Art Silk Fabrics of previous year/or Cost of Export Incentives	—	—
	11,550 86	

(c) Highlights. This is also put under other headings like "year at a glance", "facts at a glance", "the year in review", "financial highlights", "facts in a nutshell", "digest of results" or "at a glance picture". "Highlights" are normally shown in the beginning of annual report. This page is very useful inasmuch as it enables the reader to skip the detailed analysis of the report and to know the working of the company without loss me. In the "Highlights" usually information about operations such as production, sales, profit before and after tax and amount spent on capital expenditure are given. Some companies also give information about the strength of employees and also orders on hand. Information is also given about the net earnings, retained earnings and net worth per ordinary share which will help the shareholders to know the value of their shares and the potential investors to know the price that they can offer. Companies also give financial position such as information pertaining to working capital, net block and shareholders' equity. Where there is scope, important landmarks of the year are mentioned. The following examples taken from the annual reports of Britannia Biscuit Company Limited and Bharat Heavy Electricals Limited for the year 1977–78 will illustrate the usual information under this heading :

(1) BRITANNIA BISCUIT COMPANY LIMITED

Financial Highlights

		1978	1977	Increase
Operations (rupees in thousands)				
	Sales	4,57,784	4,41,346	16,438
	Profit after tax	18,567	17,052	1,515
	Capital expenditure	13,943	8,840	5,103
				Increase
Per ordinary share (rupees)				
	Net earnings	4·11	3·78	0·33
	Retained earnings	2·61	2·28	0·33
	Net worth	21·64	19·03	2·61
				Increase/ (decresase)
Financial position at year end (rupees in thousands)				
	Working capital	30,078	34,380	(4,302)
	Fixed assets	59,336	52,491	6,845
	Shareholders' equity	97,710	85,930	11,780

(2) BHARAT HEAVY ELECTRICALS LIMITED

Highlights

(Rs. in millions)

	1977–1978	1976–77	1975–76
Production	5,227	4,442	4,152
Growth (%)	18	7	33
Sales & despatches	4,958	4,697	3,743
Profit before tax	574	629	547
Profit after tax at statutory rate	243	266	231
Orders on hand (net)	14,500	11,800	8,739
Employees (Nos.)	56,100	53,600	52,000
Dividend (%)	6	6	—

The Year in Brief

Production of 2,660 MW of generating equipment,

Commissioning of 1,910 MW of power equipment

Commissioning of first 200 MW thermal set at Obra,

Commissioning of 2,650 tonne press of Hardwar

Export —Order secured from Malaysia and USA

Quality—M/s. H.V. KEMA, Holland, awarded a certificate of rating for minimum oil circuit breakers

—American Petroleum Institute has granted BHEL the right to use its monogram on oil rig components manufactured by BHEL

Manufacture for the first time of deaerators and coil type HP heaters

First fluidised bed combustion boiler successfully tested

First batch of thyristor convertors produced in collaboration with Siemens

E-2,000 on-shore *drilling rig* manufactured by BHEL went into operation.

(*c*) **Supplementary Information.** The traditional profit and loss account and balance sheet are no more considered to be the correct measures of the income and financial position of a company. Therefore, it has become necessary to provide supplementary information to meet the growing demands of the users of such reports. Some of such supplementary statements are mentioned below and are also illustrated.

1. **Source and application of funds.** This statement gives the [illegible]

Given below is one such statement taken from the annual report of Britannia Biscuit Company Limited for the year 1977–78 :

BRITANNIA BISCUIT COMPANY LIMITED

Source and Application of Funds

The following table summarises for the years ended 31st March, 1978 and 31st March, 1977, sources from which the Company has derived the funds which have been used for the development of the business.

		1978 (Rs. lakhs)	1977 (Rs. lakhs)
Funds obtained from :	Profit after tax	186	171
	Depreciation	69	58
	Sale of fixed assets	1	1
		256	230
Funds used for :	Repayment of long-term loans	1	2
	Expenditure on fixed assets	139	88
	Increase in investment	74	37
	Dividends for the year	68	68
	Increase/(decrease) in working capital	(43)	35
	Share issue expenses	17	—
		256	230

Changes in Working Capital—Increase/(decrease) :	Cash and bank balances	49	(15)
	Share application money deposited with bank	1,196	—
	Stock of finished goods, raw materials, stores and spare parts	(79)	65
	Sundry debtors	17	(3)
	Loans and advances	31	74
	Advance payment of income tax	(8)	63
		1,206	184
	Creditors and other liabilities	57	78
	Share application money	1,196	—
	Provision for taxation	(4)	71
		1,249	149
	Increase/(decrease) in working capital	(43)	35

2. **Summarised cash flow statement.** This statement gives the cash inflows and outflows and the resultant surplus or deficiency. Sandilands Committee has recommended that the annual reports should include even forecasts of cash flows for the coming year. An extract from the annual report of Bharat Heavy Electricals Limited for the year 1977–78 is given below :

BHARAT HEAVY ELECTRICALS LTD

Summarised Cash Flow

(Rs. in millions)

	1977–78	1976–77
Inflow		
From customers*	6,298·3	5,534·9
Other income	199·6	92·8
From Government	459 8	418·5
	6,957·7	6,046·2
Outflow		
Purchases	3,281·2	2,404·1
Payments to employees	698·8	612·7
Interest	251·1	284 0
Manufacturing and other expenses	716·5	721·8
Capital expenditure	428·9	378·8
Income tax	398 9	208·9
Repayment of government loans	468·8	369·5
	6,244·2	4,979·8
Surplus	713·5	1,066·4
Average cash payment per day (Rs.)	17,107,397	13,643,288
Borrowings from banks		
At the beginning of the year	291·7	1,076·0
At the end of the year	336·1	291·7
*Includes collections in the month of March	2,693·5 (43%)	1,690·0 (31%)

3. **Value Added Statement.** This statement gives the value added by manufacture which is the difference between the value of production

and cost of direct materials. This statement analyses how the value [illegible]

BHARAT HEAVY ELECTRICALS LTD

Value Added Statement :

	1977-78	% age	(Rs. in millions) 1976-77	% age
Value of production	5,539 2		4,709·7	
Cost of direct materials	2,540·3		2,212 5	
Value added	2,998 9		2,497·2	
Applied in the following way :				
Towards operations				
Salaries, wages and other benefits to employees	745 6	25	627 4	25
Other operating costs	1,262·2	42	817·1	33
Towards financing				
Interest on government loans	154 2	5	149·7	6
Interest on deferred credits	16 7	1	16 4	1
Interest on working capital	97 9	3	160 9	6
Dividend	78 0	3	78·0	3
Towards income tax	290 0	10	315·0	13
Towards expansion and growth				
Depreciation	172·7	6	129 4	5
Retained profits	181 6	5	203 3	8
	2,998 9	100	2,497 2	100

Value Added per Employee

The value added per employee in 1977–78 was Rs. 53,000 as against Rs. 10,000 in 1968–69. The percentage distribution of value added in 1977–78 was as under :

To shareholders	2 60
To sources of finance	8 96
To income tax	9 67
To expansion and development	11·66
To employees	24 86
To the company	42 25
	100 00

4. Impact of Price-level Changes. So far, published accounts have been based on historical costs and the changes in the prices of assets have been ignored. This factor has resulted in distortion in the presentation of accounts. The principle that the financial stataments must give a true and fair view is not observed because of the fact that the accounts are based on historical cost. To correct this picture in many countries serious attempts have been made for correcting the accounts for price changes. In our own country Bharat Heavy Electricals Limited have made an attempt to correct the profit and loss account and the balance-sheet for the price-level changes by adopting the current cost accounting method as recommended by the Accounting Standards Committee set out in Exposure Draft I"

The manner of adjustment and the adjusted accounts are reproduced fron the annual report of Bharat Heavy Electricals Limited for the yea 1977-78 :

BHARAT HEAVY ELECTRICALS LIMITED

Current Cost Accounts

Basis

The Current Cost Accounts presented in summarised form hav been prepared on the principles recommended by the Accounting Stand ards Committee set out in Exposure Draft 18 (Morpeth Committe recommendations).

Fixed Assets

In line with the recommendations of the Morpeth Committee, fixe assets have been revalued at current market rates wherever practicable o on the basis of official price indices.

Land which has been taken at nominal cost of Re. 1 in the historica accounts has been revalued on the current market rates.

Buildings have been revalued taking into consideration the currer rates of construction.

Plant and machinery have been revalued on a combiration of curr ent cost estimates and indices published by the Reserve Bank of India.

Other Assets and Liabilities

No revaluation of investments has been considered necessary sinc the amount involved is very small.

Cash, sundry debtors and other liabilities have not been revalue since they have already been expressed in current monetary terms.

Cost of Sales Adjustment

Cost of sales adjustment has been made based on the averagin method. The opening and closing stocks have been brought to a commo average stock price based on indices published by the Reserve Bank of Indi and cost of sales adjustment worked out on the basis of difference betwee the historical opening and closing stocks and the current cost difference o opening and closing stocks.

Taxation

No change in taxation liability has been made since it is felt tha the taxation authorities will not estimate the tax liability on current cos statement and consequently the tax liability will not change.

Equity Interest

For adjustment of equity, wholesale price index compiled by th Reserve Bank of India has been taken into consideration.

Movement of Reserves

Management considers it prudent to appropriate the effect of re valuation on account of fixed assets and cost of sales adjustment to a revaluation reserve.

Gearing Adjustment:

[illegible] been publi- [illegible] and allows [illegible] monetary liabilities exceed monetary assets, their part of the investment in fixed assets and inventories are financed by non-equity providers of finance. Therefore, the cost of sales and depreciation adjustments must be borne in part by such non-equity providers of finance, and accordingly the adjustments need to be reduced. The profit before tax to net worth after applying the Hyde Guidelines is also shown.

Profit and Loss Account

(Rs in millions)

		1977-78		1976-77
Turnover		4,958·0		4,697·2
Profit before tax and interest		843·0		956·5
Less: Interest payable		268·8		327·0
		574·2		629·5
Less: cost of sales adjustments	69·9		16·9	
Less: additional depreciation	154·0	223·9	128·9	145·8
Current cost profit before tax		350·3		483·7
Less: tax		290·0		315·6
Profit after tax		60·3		168·7
Appropriation Account				
Current cost profit after tax				
Surplus arising from:				
Cost of sales adjustment	69·9		16·9	
Revaluation of fixed assets	402·7	472·6	32·4	49·3
Appropriation to revaluation reserve		(472·6)		(49·3)
Dividend		78·0		78·0
Balance carried over to balance sheet		(17·7)		90·7
Profit after tax to net worth (%)		1·38		4·3

Balance Sheet

		1977-78		1976-77
Capital Employed				
Share Capital		1,300·0		1,300·0
Reserves		235·3		281·7
Revaluation reserve		2,820·3		2,347·7
Net worth		4,355·3		3,929·4
Borrowings		2,619·9		2,510·7
		6,975·2		6,439·7
Employment of Capital:				
Gross fixed assets	7,032·8		6,203·7	
Less: Depreciation	2,592·6	4,440·2	2,246·1	3,957·6
Capital expenditure in progress		435·4		280·2
Investment		17·9		14·5
Net current assets		2,078·7		2,187·[illegible]
		6,975·2		6,439·7

Statement of Changes in Shareholders' Net Equity Interest Allowing for Rise in the Value of Money

(Rs. in millions)

		1977-78		1976-77
Net equity interest at the beginning of the year		4,007·4		3,822·6
Net equity capital introduced during the year		—		—
Amount required to compensate for the change in the value of money during the year		(8·8)		263·1
		3,998·6		4,085·7
Net equity interest at the end of the year before dividend on equity capital		4,425·4		4,007·4
Gain for the year allowing for the change in the value of money		426·8		(78·3)
Dividend on equity capital for the year		78·0		78·0
Gain for the year after allowing for the change in the value of money and after dividend		348·8		(156·3)
Gearing Adjustment :				
Sales		4,958·0		4,697·2
Profit before tax		574·2		629·5
Less : Adjustment f				
cost of sales	69·9		16·9	
depreciation	154·0	223·9	128·9	145·8
		350·3		483·7
Gearing adjustment		125·4		81·7
Adjusted profit before tax		475·7		565·4
Provision for tax		290·0		315·0
Profit after tax		185·7		250·4
Less : Dividend		78·0		78·0
Adjusted retained profits		107·7		172·4

5. Personnel. Of late published accounts incorporate information about personnel. The information relates to number of persons employed giving the break-up category-wise, sex-wise and sometimes nationality-wise. The report also gives information regarding changes in personnel, total remuneration paid to employees and also the average remuneration paid to various categories.

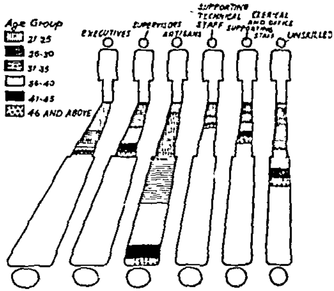
6 Human Resource Accounting. With sophisticated technology and social awareness the most valued asset of any organisation consists of the trained personnel in the form of engineers, technicians, skilled workers, executives, accountants, etc. It is very difficult to evaluate the worth of human assets to the organisation. Still in recent years some attempts have been made to quantify the value of human assets. How this is done by the Bharat Heavy Electricals Limited is given below :

BHARAT HEAVY ELECTRICALS LIMITED

Agewise Distribution of Employees as at 31-3-1978

Human Assets

BHEL employs over 56,000 people. Human resources accounting is an attempt to treat these people as organisational resources and to measure their cost and value. The 'Lev and Schwartz Compensation Model' is used for human capital valuation. According to this model, the value of human capital embodied in an individual is the present value of his remaining future earnings from employment. The promotion policy and pay scales are assumed constant.



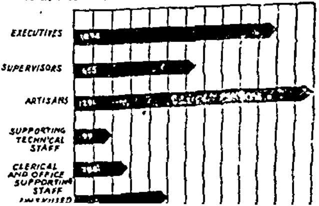
Human Asset Values

Categories	*Rs. in millions*
Executives	1,094
Supervisors	655
Skilled Artisans	1,291
Supporting Technical Staff	199
Clerical & Office Supporting Staff	286
Unskilled	502
	4,027

Professional Profile

Engineers/Technicians	10,505
Accountants	350
Doctors	220
Scientists	230
Artisans	28,792
Ministerial	4,740
Others	11,300
	56,137

Present value of future earnings Total Rs 4,027 million



7. Ten-year Summary. Most of the annual reports give ten years' statistical summary. This summary includes figures relating to (*a*) production, (*b*) sales in units, (*c*) sales in rupees, (*d*) other earnings, (*e*) elements of cost, (*f*) profit before tax, (*g*) current assets, (*h*) net block, (*i*) equity, (*j*) borrowings, (*k*) dividend, (*l*) number of employees, etc. An extract from the annual report of Britannia Biscuit Company Limited is given as an illustration :

BRITANNIA BISCUIT COMPANY LIMITED

Ten-year Financial Statistics—1969 78

(*Figures for years 1969 to 1975 have been deleted*)

(In rupees thousand)

31st March	1976	1977	1978
Assets employed			
Fixed assets *less* depreciation	49,645	52,491	59,336
Investments	4	3,714	11,094
Net current assets	30,852	34,379	30,078
Share issue expenses	—	—	1,718
	80,501	90,584	1,02,226
Financed by			
Preference shares	15	15	15
Equity shares	26,561	45,153	45,153
Reserves	49,092	40,777	52,558
Loan funds	4,833	4,639	4,500
	80,501	90,584	1,02,226
Profits and appropriations			
Sales	3,88,706	4,41,346	4,57,784
Profit before depreciation and tax	39,352	51,264	52,802
Depreciation	4,575	5,812	6,935
Profit before tax	34,777	45,452	45,867
Taxation	23,000	28,400	27,300
Profit after tax	11,777	17,052	18,567
Dividends	5,420	6,775	6,775
Retained earnings	6,357	10,277	11,792
Key ratios – percentages			
$\frac{\text{Profit before tax}}{\text{Sales}}$	8·9	10·3	10·0
$\frac{\text{Profit before tax}}{\text{Gross assets}}$	18·6	20·9	19·0
$\frac{\text{Profit after tax}}{\text{Sales}}$	3·0	3·9	4·1

Distributions of ordinary bonus shares in the proportion of 2 : 3, 3 : 5 and 7 : 10 were made in 1968-69, 1970-71 and 1976-77 respectively.

Gross assets consist of fixed assets and investments at cost and current assets excluding share application money received in 1978.

8. Significant Ratios. Ratio analysis has become a very important tool for an appraisal of the company's performance profitability and financial status. There are several types of ratios and they may be classified as measures of investment, measures of profitability, measures of performance and measures of financial status. These measures are given so that the users of published accounts can readily use them for their needs. The presentation of significant ratios as made by the Britannia Biscuit Company Limited is given below :

BRITANNIA BISCUIT COMPANY LIMITED

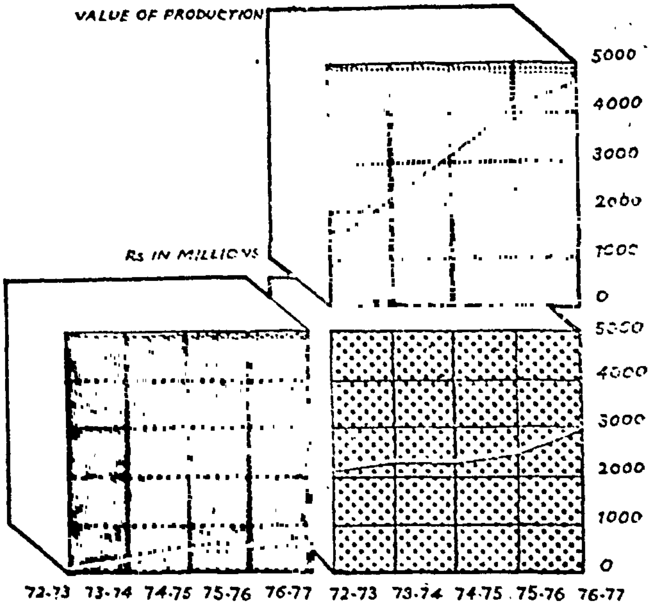
Significant Ratios

		1978	1977
Measures of Investment			
Return on equity	$\frac{\textit{Profit after loan interest and tax}}{\textit{Ordinary shareholders' funds}}$	19·0%	19·8%
Earnings per share	$\frac{\textit{Net profit less preference dividend}}{\textit{Number of ordinary shares}}$	Rs 4·11	Rs. 3·78
Dividend cover	$\frac{\textit{Earnings per share}}{\textit{Dividend per share}}$	2·7 times	2·5 times
Measures of Performance			
Profit margin	$\frac{\textit{Profit before loan interest and tax}}{\textit{Sales}}$	10·1%	10·4%
Asset turnover	$\frac{\textit{Sales}}{\textit{Net assets}}$	4·5 times	4·9 times
Debtor turnover	$\frac{\textit{Sales}}{\textit{Debtors+Bills receivable}}$	26·2 times	23·6 times
Stock turnover	$\frac{\textit{Sales}}{\textit{Stock}}$	13·9 times	10·8 times
Measures of Financial Status			
Debt ratio	$\frac{\textit{Borrowed capital}}{\textit{Ordinary shareholders' funds}}$	4·6%	5·4%
Current ratio	$\frac{\textit{Current assets}}{\textit{Current liabilities}}$	1·1 times	1·4 times
Tax ratio	$\frac{\textit{Tax provision}}{\textit{Profit before tax}}$	59·5%	62·5%

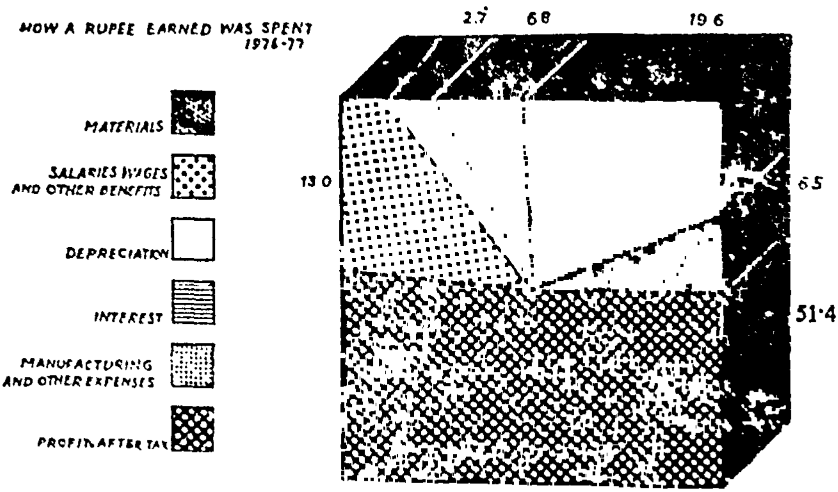
9. Accounting Policies. The preparation of financial statements [illegible] ...ion and these [illegible] ..., for a fuller [illegible] ...if any, one [illegible] ...the basis of which the financial statements are prepared. Here again Bharat Heavy Electricals Limited is one of the progressive companies which has been giving its accounting policies in its published accounts.

(d) Charts, Graphs and Diagrams. Published accounts invariably [illegible] makes the presentation of facts [illegible] ...grams, pie-charts, tabular pre- [illegible] Dividend declared and percentage of dividend to capital employed over years, comparative statistics for a number of years (usually ten years) are often shown in the form of tabular presentations. Use of divisible profits as dividends, taxes, other a[illegible] ...form of a pie-c[illegible] accounts of E[illegible]

BHARAT HEAVY ELECTRICALS LIMITED



Profit before tax Gross block



(*c*) Other Matters. Published accounts (annual report) these days are presented in a different way and there is a visible change in the attitude of company's authorities in respect of its publication. The following are some other features of modern published accounts :

Format : Annual reports are generally 20 to 23 cm. in width and

25 to 28 *cm.* in length. They are beautifully printed on high grade paper. They include coloured photographs of some important products of the company. Quite often a picture of research laboratory is included to impress upon the reader the quality of their product. The cover is very well designed and is made to attract the attention of the reader. Often it tells about the main products of the company. Sometimes it may tell about the main character of the company. For example, the main cover of the Annual Report of Bharat Heavy Electricals Limited for the year 1976-77 reveals the international character of the company with the title *'International Citizen'*. *Different* designs are adopted by different companies and these also change from year to year. For example, a company engaged in the distributive trade, may show its sales territories in a map.
on centres.
and blocks,
year are in
different type or colour or in shaded panel to distinguish them from previous year's figures.

Size of balance sheet and profit and loss account. The modern tendency is to make the balance sheet and profit and loss account as compact as possible. These are presented under the heads made compulsory by the Companies Act. This, however, does not usually hide the facts as the details are relegated to schedules which form a part of the annual report. For example, in the balance sheet investments are shown as a
investments,
taken
details
are put in the schedule. These schedules are properly numbered and arranged. The reference of these schedules is given in the balance sheet and profit and loss account. In the case of profit and loss account also cost of sales is shown as one figure and various items constituting cost of sales are shown in the schedule. Some of the annual reports contain as many as 20 to 25 schedules.

generally shown
In the
mmittee
has recommended that companies be allowed the discretion to round-off the figures in the balance sheet to the nearest thousand or hundred or ten
will faci-
recom-
mendation of the

Vertical presentation of final accounts. Many companies, instead of preparing balance-sheet and profit and loss account in the horizontal form present them in vertical style. The vertical presentation of final accounts facilitates the comparison of figures with that of previous year and also enables the company to show ratios which always give better perspective of the situation. It brings out many additional facts like capital employed, working capital in the case of a balance sheet and cost of goods sold, grosss profit, cost of sales, etc., in the case of profit and loss account. These break-ups are not possible when balance sheet and profit and loss account are presented in the horizontal form. Because of the recent amend-

ment to Schedule VI, companies have the option to present the balance sheet either in the horizontal form or vertical form.

ASSIGNMENT MATERIAL

Questions

1. What is an annual report ?. Why is it necessary to publish an annual report ?

2. "Annual report gives yearly survey of the operating results and the financial affairs of the company." Comment.

3. What is the distinction between the "Annual Report" and the "Directors' Report" of a company ?

4. "Published accounts conceal much more than that they reveal." Critically examine this statement in the light of the existing law and practice. What further disclosures would you recommend ?

5. Write a reasonable note on the recommendations made by the Sachar Committee with regard to Directors' Report.

6. Most of the companies give ten-year survey of the company's affairs. What advantage do you think you can get out of it as a shareholder ? Draw an imaginary 10-year survey of a progressing company.

7. Quite a few companies in India have started giving "At a glance" story of the company. You are required to give an imaginary "At a glance" story of a company.

8. Describe some modern trends in published accounts of companies.

9. Why is it necessary that more and more companies should be encouraged to draw up their annual reports in a manner which would be interesting, informative, easy to understand and also educative ? What is the role of the Institute of Chartered Accountants of India in achieving this objective ?

SUGGESTED READING

1. *Understanding Company Financial Statements*—R.H. Parker (Penguin)
2. A Conceptual Framework for Financial Accounting & Reporting—Richard Macve (Institute of Chartered Accountants in England & Wales)
3. Survey of Published Accounts 1976—(Institute of C.A. in England & Wales)
4. Reports & Accounts of Nationalied Industries—Andrew Likierman
5. Annual Reports of BHEL, Britannia, Reliance—Hindustan Lever etc.

7

Valuation of Goodwill and Shares

The chapter discusses two topics : (*i*) Valuation of goodwill ; and (*ii*) Valuation of shares. Under both the headings first theoretical concept and then methods of valuation have been discussed.

I—GOODWILL

Definition What is goodwill ? It is a thing very easy to describe, but very difficult to define It is an intangible real asset. "It is perhaps the most intangible of the intangibles." But it is not a fictitious asset. Its valuation is the most complex and controversial affair and often encounters more than reasonable suspicion in its treatment in accounting.

[illegible] advantage :

> "Goodwill is the present value of a firm's anticipated *excess earnings*."

This definition is normally found acceptable by the courts and is found in accounting literature. The word "excess" gives sufficient hint as to its valuation which is equal to earning attributable to rate of return on tangible assets and intangible assets other than goodwill over and above the normal rate of return earned by representative firms in the same industry. "Excess" earnings also reflect at various advantages which a firm may enjoy in contrast to its competitors. Advantages may be : [illegible] account of its local [illegible] influence, punctuality, [illegible] partialities or pre- [illegible] more than the pro- [illegible] lace." According to [illegible] a thing very easy to describe, very difficult to define. [illegible] and advantage of the good name, reputation and connection of a business. It is the attractive force which brings in customers. It is the one thing which distinguishes an old established business from a new business at its first start."

In the words of Spicer and Pegler "Goodwill may be said to be that

1. *The Economics of Accountancy* (New York) : The Ronald Press Company, 1920), p. 38.

element arising from the reputation, connection, or other advantages possessed by a business which enables it to earn greater profits than the return normally to be expected on the capital represented by the net tangible assets employed in the business."

Prof. Dicksee says, "When a man pays for goodwill, he pays for something which places him in the position of being able to earn more money than he would be able to do by his own unaided efforts."

Thus goodwill may be described as the *extra saleable value* attaching to a prosperous business beyond the intrinsic worth of the net assets. It is one of the various intangibles such as patents, trade marks, copyrights, concessions, etc. It is non-visible. It does not become obsolete. But it is subject to fluctuations.

Factors affecting value of goodwill

It has already been said that goodwill of a business house is represented by its capacity to earn excess profit. Thus all factors which help in earning profits influence the goodwill of the firm.

Locational factor. If the business is located at a favourable and prominent position then it increases the value of goodwill. It is the position of the business in the market which, to a great extent, helps in attracting customers. Thus, a favourable location of the business enhances its goodwill.

Time factor. The period for which the business has been in the market is another factor influencing the value of goodwill. If two businesses are having the same locational advantage then probably, other things remaining the same, the business older in age is better known to its customers and thus likely to have more commercial reputation.

Nature of business. The nature of the business is another factor considered in deciding the value of goodwill. This includes

(*i*) *The nature of goods.* If the business deals in goods necessary for daily use the demand for it is likely to be stationary and consequently resulting in steady profits. If it deals in goods affected by fashion, fancy of people, then demand for it may be sometimes erratic and thus making profits jumpy and uncertain. The more the stable business, the more is goodwill and *vice versa*. (*ii*) *Risk involved.* The more the risk, less is goodwill. (*iii*) *Monopolistic nature of business.* A business having monoply market enjoys assured profits and therefore enjoys more goodwill. If however, the monopoly conditions are expected to prevail only for a short period, to that extent the goodwill will have a lesser valuation. (*iv*) *Other formalities.* If the nature of business is such that it needs import licence and other clearances from the government then it would be quite difficult for new persons to enter the field. Thus the existing business house enjoys monopoly and hence earns more profit. The goodwill of such a house is more.

Capital required. The business requiring comparatively less amount of capital will find more buyers and consequently raise the value of its goodwill. On the other hand, there will be less persons to buy a business needing large amount of capital. Thus lack of competition among buyers

may pull down the amount of goodwill. Precisely, out of two businesses having same rate of profit, the one requiring less amount of capital will be much in demand and will realise a higher amount for goodwill.

Efficiency of management. The efficient management helps in increasing profits of the business through planned production and distribution, which, in turn, increases the value of goodwill. However, before *valuing the amount of goodwill, it must be carefully* seen that services of such efficient management shall not be discontinued in the future.

Possibility of competition The likelihood of competition in the future either by the vendor himself or by some other party affects the value of goodwill adversely.

Of course, competition by outsiders cannot be stopped ; it can be at the most estimated. But a competition by the vendor can be ruled out by entering into an explicit contract that vendor shall restrain himself from dealing in the same class of business for a specified period.

Miscellaneous factors. Besides the factors mentioned above there are some more elements affecting the value of goodwill, *viz.*,

(*i*) *Money market condition.* Easy money market condition will raise the value of goodwill in general and *vice versa*

(*ii*) *Peace in the country.* General prosperity in the country gives a fillip to the business and consequently to the value of goodwill.

(*iii*) *Government's attitude.* Government's encouragement for a particular line of trade or industry, in general, makes persons ready to pay even a little more for goodwill, *e.g.*, business in fertilisers, agricultural goods. Similarly, doubtful attitude of the government about a particular type of trade discourages persons to pay for goodwill, *e.g.*, government's attitude towards gold business in India.

(*iv*) *Tendency of profit.* If profits of the business show a rising trend it attracts higher amount of goodwill. Declining profits will reduce the value of goodwill.

Precautions in valuing goodwill

Goodwill is always paid for the future. It may be seen that *goodwill of a business is built in the past but paid for the future* The reputation of a business house is always raised slowly and slowly by a series of acts over a number of years ; and buyer is ready to pay a little more than the intrinsic value of asset only for this reputation. But buyer is ready to pay *for this reputation only when he hopes to get some advantage from such goodwill in the* future. If the advantage is not likely to come to the buyer then, even if the value of goodwill is very high buyer will not be ready to pay for it. Therefore, when evaluating the amount of goodwill buyer always keeps the *future* in mind.

Calculation of average profit This principle is so important in valuing goodwill that while calculating average profits for the purposes of goodwill : (*a*) all actual expenses and losses not likely to occur in the future are added back to profits, *e.g.*, loss from fire, loss on account of theft, extraordinary salary of a person not likely to continue in the future ; (*b*) expenses and losses expected to be borne in future are deducted from

such profits, *e.g.*, salary of directors and clerks to be appointed ; (*c*) all profits likely to come in the future are added, *e.g.*, possibility of some profits in the future due to new line of trade now ; and (*d*) even actual profits not likely to recur are deducted, *e.g.*, extraordinary profit due to availability of a licence for a temporary period or profit resulting from sharp rise in price due to acute shortage of the product. *After having adjusted profit in the light of future possibilities* average profits are calculated and then value of goodwill is estimated.

Personal and impersonal factors. The personal factor involved in the building of reputation of a business is an important factor taken care of at the time of valuing goodwill. It is said that *more the personal factor, less is the value of goodwill and less the personal factor more is the value of goodwill to be paid for.* For example, although the goodwill of the clinic of Dr. *A* is very high but if that clinic is to be purchased by Dr. *B*, who is a fresh graduate from the university, then he should not pay very high amount for the goodwill of Dr. *A*'s clinic because in the past income was affected more by the personal qualities of Dr. *A* which Dr. *B* cannot purchase. The goodwill due to the personality of a man goes with the man and *there is no resultant profit* accruing to the buyer in the future and hence he should not pay for it.

Need for valuation

The need for valuation of goodwill depends on the form of business organisation. In the case of a sole trader, it is usually valued at the time of selling the business, so as to determine the amount payable by the buyer towards goodwill. In the case of partnership there are several circumstances when goodwill has to be valued. They are :

(*a*) When a new partner is admitted,

(*b*) When a partner retires or dies,

(*c*) When there is a change in the ratio of profit sharing, and

(*d*) When there is dissolution either by sale to a company or amalgamation with another firm.

In the case of limited companies

(*a*) When two or more companies amalgamate,

(*b*) When one company takes over another,

(*c*) When a company wants to acquire controlling interest in another company, and

(*d*) When government takes over the business.

Methods of valuing goodwill

There are two methods of valuing goodwill—(*i*) Simple profit method ; and (*ii*) Super profit method. Each method has been discussed in the following pages.

Simple profit method

Under this method goodwill is expressed to be a purchase of certain number of years' profits based on the average of a given period. This involves two steps : (1) Calculation of average profits taking into consideration the profits of the preceding three or four years' profits.

average profits. Before going into the details of calculations it may be necessary to know as to : (a) Why should one calculate average profits ? and (b) Why should one multiply the average profits by a given number of years ?

Why average profits ? A buyer pays for goodwill of a business only

future, other things remaining the same, can always be estimated. The estimate for the future always depends upon the performance in the past. Therefore, in a business what profits are likely to accrue in the future depends upon its average performance in the past and hence the average profits. It may be repeated that *before calculating average profits, they must first be adjusted in the light of future possibilities.* Care must be taken to see whether profits are increasing or decreasing over years.

Why multiply by number of years ? In order to understand the philosophy of multiplying the average profits by certain number of years an example of a car with a driver may be taken where car stands for a business and the driver for a businessman. The driver (businessman) has to make many efforts in order to bring the car (business) in a good speed, *i.e.*, he puts it in first gear, then second gear, and so on. When the car has gained certain speed then it can keep going with that speed without much effort. If at this moment some new driver (a new businessman) wants to take over the charge of this car, then he (new driver) is put in an advantageous situation inasmuch as he has not to make those initial efforts

Goodwill = Average Profit × Number of years

Illustration 101. *X* purchased business from *Y* on 30th June 1978. Profits earned by *Y* for the preceding years ending on 31st December each year were—1975 Rs. 41,000 ; 1976 Rs. 40,000, and 1977 Rs. 42,000.

...on-recurring item
due to an extra-
not insured and
The premium
purchasing ...

ness, was employed with Rama Bros Ltd. and was getting Rs. 500 p.m. He intends to replace the manager of the business who at present is getting Rs. 350 p.m. The goodwill is estimated at 2 years' purchase of the average profits. You are required to calculate goodwill of the business.

Solution :

		Rs.
Profits 1975		41,000
Profits 1976	40,000	
Less Non-recurring profit	1,500	38,500
Profits 1977	42,000	
Add Extraordinary loss	2,000	44,000
Total profits		1,23,500
Average profits (*i.e.*, Rs. 1,23,500÷3)		41,167
Less Expenses to be paid in future :		
Insurance premium	200	
Salary, 12×Rs. 500	6,000	6,200
		34,967
Add expenses not to be paid in future :		
Salary of a manager, 12 × Rs. 350		4,200
Net average profit to come in future	Rs.	39,167

Goodwill=2 years×Rs. 39,167=78,334.

Super profit method

Goodwill, no matter how determined, represents a valuation of future earnings. As per the first definition of goodwill, it presents the value of firm's anticipated "excess" earnings. It there are no anticipated excess earnings over normal earnings, there can be no goodwill. Thus goodwill is paid by a buyer only if the business that is being purchased is earning profits in excess of normal rate of earnings. It is such excess profit that is referred to as super profit and represents the difference between the average profit earned by the business and the normal profit based on the normal rate of return for representative firms in the industry. Hence, this method of valuing goodwill will require the following information : (1) A normal rate of return for representative firms in the industry ; (2) The fair value of capital employed ; and (3) The estimated future earning of the firm, *i.e.*, average of the profits earned in the past three or four years. Each has been discussed below :

Normal rate of earnings. The normal rate of earning is that rate of earning which investors in general expect on their investments in a particular type of industry. This rate of earning differs from industry to industry. In most of the cases question mentions the normal rate of earning applicable to that type of industry. In case it is not mentioned student is advised to estimate it basing his judgment on the merits of the

case. Sometimes, the question gives information sufficient for calculating the normal rate of earnings. The normal rate of earning is required to be adjusted in the light of certain circumstances such as :

(i) *Higher bank rate.* Any increase in the bank rate increases the expectations of investors and they start hoping higher rate of return.

(ii) *General boom.* When there is a boom in industry the investors start expecting more and normal rate of return is to be increased.

(iii) *Risk attached to the investment.* The more the risk, more is the rate of return. Risk may be due to high amount of borrowings made by the business or nature of business.

(iv) *Period of investment.* The longer the period of investment, higher is the rate of return.

Illustration 102 *X* Ltd declared dividend at 25% on its shares of Rs. 10, Rs. 8 paid up. Its shares are quoted in the market at Rs 10. You are required to calculate the normal rate of earning.

Solution

∵ On Rs 100 company pays dividend of Rs. 25

∴ On Rs. 8 „ „ „ $\frac{25}{100} \times$ Rs 8 = 20%.

Since the share is quoted in the market at Rs. 10, therefore, it [illegible] divi- [illegible] 0 (as [illegible] eady [illegible] In other words, he thinks that the return is a reasonable one. The return is :

∴ On Rs. 10 (new investment) the return is Rs. 2

∴ On Rs. 100 „ „ „ $\frac{2}{10} \times$ Rs. 100 = 20%.

The reasonable rate or normal rate is 20%.

Fair value of capital employed. It is not easy to calculate the value of capital employed for the purpose of goodwill. In order to understand the concept following steps are suggested :

Ist Method : *Asset side approach.* Since the value of capital employed is calculated for valuing the normal profit available to the shareholders, it is always calculated as follows

		Rs.
Assets (other than goodwill and deferred expenditures like preliminary expenees, discount etc.) at market value		×××
Less Liabilities due to outside parties, *i.e.*, creditors, bills payable, debentures, taxation, outstanding bills, etc.) at revised values, if any		×××
Capital employed		×××
Less Half of the profit earned during the year		×××
Average capital employed	Rs.	×××

2nd Method · Liabilities side approach. Capital employed can also be calculated by adding to share capital all profits, reserves, and gains on revaluation of assets and liabilities and deducting therefrom all losses shown in the balance sheet, goodwill, losses on account of revaluation of assets and liabilities.

Illustration 103 From the following you are required to calculate (*i*) capital employed ; and (*ii*) average capital employed :

		Rs		Rs.
Pref share capital		1,00,000	Goodwill	20,000
Equity share capital		2,00,000	Land and buildings	70,000
Reserves (including profit of current year Rs. 40,000)		60,000	Plant	1,20,000
Workmen compensation fund		85,000	Current assets	3,00,000
Depreciation fund :			Investments	90,000
Land and buildings	20,000		Investments for replacement of plant	20,000
Plant	30,000		Preliminary expenses	5,000
		50,000		
Debentures		70,000		
Creditors		60,000		
	Rs.	6,25,000	Rs.	6,25,000

Solution :

1st Method (Assets side approach)

		Rs.
Land and building		70,000
Plant		1,20,000
Current assets		3,00,000
Investments		90,000
Investment for replacements of plant,		20,000
		6,00,000
Less : Debentures	70,000	
Creditors	60,000	
Land and building dep. fund	20,000	
Plant dep. fund	30,000	
		1,80,000
Capital employed	Rs.	4,20,000

2nd Method (Liabilities side approach)

		Rs.
Pref. share capital		1,00,000
Equity share capital		2,00,000
Reserves		20,000
Profit		40,000
Workmen compensation fund		85,000
		4,45,000
Less : Goodwill	20,000	
Preliminary expenses	5,000	
		25,000
Capital employed	Rs.	4,20,000

Average capital employed :

		Rs.
Capital employed		4,20,000
Less $\frac{1}{2}$ of the profit, $\frac{1}{2}\times$Rs. 40,000		20,000
Average capital employed	Rs.	4,00,000

Illustration 104 What will be the (*i*) capital employed ; and (*ii*) average capital employed in the preceding case if market value of land and buildings is Rs. 90,000 and that of plant and machinery is Rs. 70,000. Investment,

other than those for replacement of plant, may be treated non-business investments.

Solution :

1st Method (Assets side approach)

		Rs.
Land and building (market value)		90,000
Plant (market value)		70,000
Current assets		3,00,000
Investments for the replacement of plant		20,000
		4,80,000
Less : Creditors	60,000	
Debtors	70,000	1,30,000
Capital employed		3,50,000
Less ½ of profit		20,000
Average capital employed Rs		3,30,000

2nd Method (Liabilities side approach)

		Rs.
Pref share capital		1,00,000
Equity share capital		2,00,000
Reserves		20,000
Profits		40,000
Workmen compensation fund		85,000
Less : Goodwill	20,000	
Preliminary exp	5,000	
Investments	90,000	1,15,000
		3,30,000
Less Loss on plant (Rs 1,20,000—Rs 30,000—Rs 70,000)		20,000
		3,10,000
Add Gain on revaluation of land and building [Rs. 90,000—(Rs 70,000—Rs 20,000)]		40,000
Capital employed		3,50,000
Less ½ of profit		20,000
Average capital employed Rs.		3,30,000

It must be remembered that ½ of the profits is deducted on the basis that they are earned evenly throughout the year and also that when profits are earned every day then profit earned on 31st December cannot be re-employed but profit earned on 1st January is re-employed for the whole year. Thus on an average basis ½ of the profit is employed throughout the year. The logic of deducting half of the profit can be explained by taking another example Let capital in the beginning be Rs 4,000 and let there be a profit of Rs. 50 so that capital at the end is Rs 4,050. Average capital is nothing but the capital in the beginning plus that at the end divided by 2 Thus in this case average capital employed is (Rs. 4,000 + Rs. 4,050) ÷ 2 = Rs. 8,050 ÷ 2 = Rs. 4,025. The same result can be obtained by deducting half of the profits earned during the year from the capital employed at the end In this case it will be Rs. 4,050 — ½ × Rs 50 = Rs 4,050 — Rs. 25 = Rs. 4,025. Thus we can say that average capital employed can be calculated by (*i*) taking average of capital in the beginning and that at the end, or (*ii*) by *deducting* ½ of the profit from capital at the end : or (*iii*) by *adding* half of the profit to capital in the *beginning*.

Normal profit. With the help of normal rate of gross profit and average capital employed, a student can very easily calculate the normal profit. For example, if the average capital employed is Rs. 50,000 and

the normal rate is 20% then normal profit is—

$$\frac{20}{100}\times \text{Rs. } 50{,}000 = \text{Rs. } 10{,}000$$

Average profit. Average profit is calculated only in order to find out the expected future earnings. This is based on the logic that the past, to a great extent, is projected in the future. But it must be carefully noted that before calculating the average profit, the profits earned in the past must be *adjusted* in the light of *future* expectations. That is, any extraordinary loss suffered in the past must be added to profits of that year in which it was suffered and extraordinary gain made must be deducted, because in both the cases they are not likely to occur in the future.

One more point, while calculating average, is worth considering. The average of the past few years is to be calculated only when there are fluctuations in the profit. If there are no fluctuations, rather there is a clear-cut increasing or decreasing tendency, then immediately preceding year's profit may be taken as the profit likely to be earned in the future. If required it may be adjusted a little.

Sometimes when no definite results are visible because business has been run only for a short time a weighted average can be calculated. While calculating weighted average maximum weight is to be given to the latest year. Thus, if average profit of 1967, 1968, 1969 is calculated then they may be given 1, 2 and 3 weights, respectively. Average profit can be :

Year	*Profit*	*Weight*	*Product*
1967	18,000	1	18,000
1968	20,000	2	40,000
1969	19,000	3	57,000
		6	1,15,000

Average Profit=1,15,000÷6=Rs. 19,167 (approx).

If profits are given for 1967, 1968, 1969, 1970 and 1971 and weighted average profit is to be calculated then weights will be assigned as follows : 1967—1 ; 1968—2 ; 1969—3 ; 1970—4 ; 1971—5.

Super Profit. Super profit is a simple difference between average profit and normal profit. In the above example, average profit is Rs. 19,167 and normal profit is Rs. 10,000. Thus, super profit is Rs. 9,167.

Goodwill based on super profit method

There are three methods of calculating goodwill based on super profit. The methods and their formulae are given below.

(*a*) (*i*) Purchase of super profit method. Goodwill as per this method is :

=Super Profit×Number of years

If 3 years are taken as reasonable number of years then goodwill be :

=Rs. 9,167×3 years=Rs. 27,501.

The logic of multiplying with 3 or 4 years is the same as discussed under simple profit method.

Illustration 105 The balance sheet of *X* Ltd as on 31-3-1978 is as follows :

Liabilities	Rs.	*Assets*	Rs.
8% 5,000 pref. shares of *Rs. 10 each*	*50,000*	Goodwill	10,000
10,000 Equity shares of Rs. 10 each	1,00,000	Fixed assets	1,80,000
Reserves (including provision for taxation Rs. 10,000)	1,00,000	Investments (5% Govt. loan)	20,000
8% Debentures	50,000	Current assets	1,00,000
Creditors	25,000	Preliminary expenses	10,000
		Discount on debentures	5,000
	Rs. 3,25,000		Rs. 3,25,000

The average profit of the company (after deducting interest on debentures and taxes) is Rs. 38,000. The market value of the machinery included in fixed assets is Rs. 5,000 more.

Expected rate of return is 10%.

Evaluate the goodwill of the company at five times of the super profits. *(B. Com. Gujarat, April 1978)*

Solution :

1. Average capital employed by *X* Ltd :

	Rs.	Rs.
Fixed assets	1,80,000	
Add increase in the market value of machinery	5,000	
		1,85,000
Current assets		1,00,000
Gross assets		2,85,000
Less : Liabilities		
Debentures	50,000	
Creditors	25,000	
Taxation	10,000	
		85,000
Capital employed		2,00,000
Less ½ of profit		15,000
Average capital employed		1,85,000

Note : Investment in Government loan is taken as a non-business investment. Likewise interest on Government loan is excluded from the profit made by the business.

2. Normal profit

Average capital employed × expected rate of return

$= \text{Rs. } 1,85,000 \times \frac{10}{100}$

$=$Rs. 18,500.

3. Super profit
 Actual profit (adjusted)—Normal profit
 $=$Rs. 30,000—Rs. 18,500
 $=$Rs. 11,500

4. Goodwill
 5 years purchase of super profit
 $=$Rs. $11{,}500 \times 5$
 $=$Rs. 57,500.

(*ii*) **Sliding-scale valuation of super profit.** This method is a variation of purchase method. This has been advocated by A. E. Cutforth* and is based upon the theory that the greater the amount of super profit, the more difficult it would be to maintain. The reasoning behind this is that higher percentage of profit would attract more traders and so shorten the time during which the additional portion of super profits would be obtainable. Cutforth, therefore, divides the super profits into two or three divisions. Each of these he multiplies by a different number of years' purchase, in descending order from the first division. Thus if super profits were estimated at Rs. 15,000, the goodwill will be calculated as under :

		Rs.
First Rs. 5,000 at, say, 5 years' purchase		25,000
Second Rs. 5,000 at, say, 4 years' purchase		20,000
Third Rs. 5,000 at, say, 3 years' purchase		15,000
Total amount of goodwill	Rs.	60,000

(*b*) **Annuity method of super profit.** Goodwill as per this method is :

$=$Super profit $\times$ Reference to Annuity Table

The reference is given at the normal rate of profit and is for the same number of years for which purchase method is applied. In other words, goodwill in this case is the discounted value of the total amount calculated as per purchase method. The formula for calculating goodwill as per annuity method, if reference to annuity table is not given, is as under :

$$\text{Goodwill} = \left(\frac{1 - \frac{1}{(1+i)^n}}{i}\right) \qquad \text{where } i = \frac{r}{100}$$

$$\frac{1 - \dfrac{1}{\left(1+\dfrac{r}{100}\right)^n}}{\dfrac{r}{100}} \qquad \text{...Form (I)}$$

Since $\dfrac{1}{\left(1+\dfrac{r}{100}\right)^n}$ can also be written as $\left(1+\dfrac{r}{100}\right)^{-n}$, therefore, the

* Methods of Amalgamation and Valuation of Business

above formula can be restated as under :

$$=1-\frac{\left(1+\frac{r}{100}\right)^{-n}}{\frac{r}{100}} \qquad \text{...Form (II)}$$

Supposing the fair rate of return is 10% then present value (or goodwill) for Re. 1 for 3 years' purchase will be as under (values substituted in Form I formula) :

$$=\frac{1-\frac{1}{\left\{1+\frac{10}{100}\right\}^{3}}}{\frac{10}{100}}=\left(1-\frac{1}{\left(\frac{11}{10}\right)^{3}}\right)\times\frac{10}{1}=\left(1-\frac{1}{\frac{1331}{1000}}\right)\times\frac{10}{1}$$

$$=\left(1-\frac{1000}{1331}\right)\times\frac{10}{1}=\frac{331}{1331}\times\frac{10}{1}=\frac{3310}{1331}=\text{Rs. } 2{\cdot}48685$$

2.48685 now can be multiplied with the amount of super profit to get the amount of goodwill as per annuity reference.

(c) Capitalization of super profit. As the name suggests, this ... g the super profit. If ... er profit is (say) Rs.

$$=\text{Super profit}\times\frac{100}{\text{Normal rate of profit}}$$

$$=\frac{100}{10}\times\text{Rs. } 9{,}167=\text{Rs. } 91{,}670.$$

There is also another method of capitalization frequently employed. Under this method adjusted average profits are capitalized on the basis of normal rate of return and from such a value, the net assets of the business are subtracted to arrive at the value of goodwill.

Illustration 106.

From the data given below calculate the goodwill of the company by the capitalization method :

(1) Normal rate of return applicable to the class of business carried on by the company 10%.

(2) Adjusted average profits of the preceding 5 years Rs. 30,000.

(3) Net assets employed in the company Rs. 2,00,000.

Solution. Capitalized value of the profits at normal rate of return

$$=\frac{\text{Rs } 30{,}000}{10}\times 100$$

$$=\text{Rs } 3{,}00{,}000$$

Goodwill = Capitalized profits − Net assets

= Rs. 3,00,000 − Rs 2,00,000

= Rs. 1,00,000.

Conclusion. The super profit method of calculating goodwill ... edge over simple profit method as in this method due consid...

given to capital employed in the business which is absolutely ignored in simple profit method. Under super profit method, purchase method is an ideal method as annuity method tries to become too exact in uncertain situations and capitalisation method gives the maximum amount of goodwill so as not to leave any advantage for the buyer.

Illustration 107.

The following particulars are available in respect of the business carried on by Wisehead :

(*i*) Capital employed Rs. 50,000 ; (*ii*) Trading results—1969 profit Rs. 12,200. 1970 profit Rs. 15,000, 1971 Loss Rs. 2,000, 1972 profit Rs. 21,000 ; (*iii*) Market rate of interest on investments 8% : (*iv*) Rate of risk return on capital invested in business 2% ; and (*v*) Remuneration from alternative employment of the proprietor (if not engaged in business) Rs. 3,600 p.a.

You are required to compute the value of goodwill on the basis of 3 years' purchase of super profits of the business calculated on the average profits of the last four years. (C.A. Inter 1973)

Solution.

	Rs.
Average profit (12,200+15,000−2,000+21,000)÷4	11,550
Less Remuneration for the proprietor	3,600
Average maintainable profits	7,950
Normal profit, 10% on capital	5,000
Super profit	2,950
Goodwill at 3 years' purchase of super profit	8,850

Tutorial Notes Normal rate of profit has been calculated by adding risk factor to the normal rate of interest.

Illustration 108.

State with reasons whether the following statement is correct or not :

Sunil-Sonal's financial position is as follows :

		Rs.
(*a*)	Sundry assets	9,27,342
(*b*)	Current liabilities	52,492
(*c*)	Average net profit of the last four years	1,20,500
(*d*)	Average capital employed	9,00,000
(*e*)	Partner's average annual remuneration	18,000
(*f*)	The goodwill valued at four years purchase of super profit is	50,000

Therefore the expected rate of return is 15%.

(*B. Com. Gujarat, 1975*)

Solution.

	Rs.
Goodwill being four years purchase of super profits	50,000

∴ Super profits per year (average)	12,500
Average net profit of the last four years	1,20,500
Less Average remuneration	18,000
Adjusted net profits	1,02,500

Super Profit = Adjusted net profits − Normal profits.

∴ Normal Profit = Adjusted net profit-Super profit.

= Rs. 1,02,500-Rs. 12,500

= Rs. 90,000.

Since the average capital employed is Rs. 9,00,000, normal profit of Rs. 90,000 works out to 10% return.

∴ The expected rate of return is 10% and not 15% as stated.

Illustration 109. [illegible] (*a*) Capital employed Rs. 1,50,000 [illegible] (*c*) Present value of annuity of Re. 1 [illegible] (*d*) Net profits for five years : 1st yea[illegible]00, 3rd year, Rs. 16,900 ; 4th year, [illegible]).

The profits included non-recurring profits on an average basis of Rs. 1,000 out of which it was deemed that even non-recurring profits had *a tendency of appearing at the rate of Rs. 600 p.a.*

You are required to calculate goodwill—(*a*) as per annuity method ; (*b*) as per five years' purchase of super profit ; and (*c*) as per capitalization *of super profit method.*

Solution.

$$\text{Average profit} = \frac{\text{Rs }(14{,}400+15{,}400+16{,}900+17{,}400+17{,}900)}{5}$$

	= Rs 16,400
Less Non-recurring profit	1,000
	15,400
Add Recurring profit	600
Average expected profit	*16,000*

Normal profit $= \frac{10}{100} \times$ Rs. 1,50,000 = Rs 15,000

Super profit = *Rs. 16,000* − Rs 15,000 = Rs. 1,000

Goodwill as per purchase method 1,000 × 5 = Rs. 5,000

Goodwill as per annuity method 1,000 × 3.78 = Rs. 3,780

Goodwill as per capitalisation method $\frac{100}{10}$ × 1,000 = Rs. 10,000

Illustration 110 Mr Kempe Gowda has invested a sum of Rs [illegible] *in his own business which is a very profitable one.* The [illegible] earned from his business is Rs 60,000 which includes a sum [illegible] received as compensation for acquisition of a part of his [illegible]

The money could have been invested in dep[illegible]

years and over at 10% interest and himself could earn Rs. 7,200 per annum in alternative employment.

Considering 2% as fair compensation for the risk involved in the business, calculate the value of goodwill of his business on capitalisation of super-profits at the normal rate of return. (Adapted from C.A. Inter)

Solution :

		Rs.
Profits earned from business		60,000
Less : Compensation for premises not being business income	10,000	
„ Reasonable remuneration for Mr. Kempe Gowda	7,200	
		17,200
Expected future profit		42,800
Less : Normal profits at 12% on Rs. 3,00,000 capital employed		36,000
Super profits	Rs.	6,800

Goodwill on capitalisation of profits on the basis of normal rate of return of 12%.

$$=\text{Rs. } 6,800\times\frac{100}{12}$$

$$=\text{Rs. } 56,667.$$

Illustration 111. *P* Ltd proposed to purchase the business carried on by Shri *C*. Goodwill for this purpose is agreed to be valued at three years purchase of the weighted average profits of the past four years. The appropriate weights to be used are : 1966, 1, 1967, 2, 1968, 3, 1969, 4.

The profits for these years are : 1966, Rs. 20,200 ; 1967, Rs. 24,800; 1968, Rs. 20,000 ; and 1969, Rs. 30,000.

On a scrutiny of the accounts the following matters are revealed : (*a*) On Ist September, 1968 a major repair was made in respect of the plant incurring Rs. 6,000 which amount was charged to revenue. The said sum is agreed to be capitalised for goodwill calculation subject to adjustment of depreciation of 10% p.a. on reducing balance method ; (*b*) The closing stock for the year 1967 was over-valued by Rs. 2,400 ; (*c*) To cover management cost an annual charge of Rs. 4,800 should be made for the purpose of goodwill valuation. Compute the value of goodwill of the firm. (Adapted from C.A. Inter)

Solution :

Before calculating the weighted average profit it is necessary to adjust the profits in the light of information

(a) *Calculation of adjusted profits :*

		Profit
		Rs.
1966	(no adjustment)	20,200−4,800 = 15,400
1967	(Rs. 24,800−Rs. 2,400). Over-valuation of stock had increased the profit	22,400−4,800 = 17,600
1968	(Rs. 20,000+Rs. 2,400+Rs. 6,000 −Rs. 200)	28,200−4,800 = 23,400
1969	(Rs. 30,000−Rs. 580)	29,420−4,800 = 24,620

Average profit

Year	Profit	Weight	Product
1966	15,400	1	15,400
1967	17,600	2	35,200
1968	23,400	3	70,200
1969	24,620	4	98,480
		10	2,19,280

Average profit $=\frac{2,19,280}{10}$ = Rs. 21,928

Goodwill = 21,928 × 3 = Rs. 65,784.

Tutorial Notes 1. It has been assumed that stock at the end of 1967 has been taken to 1968 at the value at which it appeared at the end of 1967. It has increased the profit of 1967 and decreased the profit of 1968. Further it has been assumed that stock at the end of 1968 has been properly valued.

2. Capitalisation of the repair will increase the profit of 1968 by Rs. 6,000 and at the same time reduce its profit by extra depreciation for 4 month 10% on Rs. 6,000.

3. 1969 depreciation for full year on the extra capitalised value is charged at 10% on W.D.V. *i.e.*, (Rs. 6,000−Rs. 200) 1/10.

2—VALUATION OF SHARES

Shares of a company are valued on many occasions like :

(1) At the time of purchase and sale of shares in private companies and other unquoted shares.

(2) When a block of shares is to be purchased to acquire a controlling interest in another company.

(3) At the time of amalgamation, absorption, etc., for adjusting the rights of shareholders.

(4) To determine the amount payable to dissentient shareholders under Section 494 of the Companies Act. This section deals with schemes of reconstruction.

(5) For the assessment of estate duty, wealth tax and gift tax by tax authorities.

(6) When shares are pledged as a security against a loan.

(7) When shares of one class are converted into another class, and

(8) When Government wants to compensate the shoreholders on the nationalisation of a company.

While valuing shares, following factors are taken care of because they influence the value of shares :

(a) demand and supply of shares,

(b) the nature of business,

(c) the possibility of competition,

(d) other factors like political influence, general peace in the country, etc.

(e) availability of ready market for future sale.

Methods of valuation

The method of valuation depends on the purpose for which valuation is required. There are broadly three methods of valuing shares : (a) Net asset method or intrinsic value method or break-up value method ; (b) Yield method or income method ; and (c) Earning capacity method. The methods of valuation relate mainly to equity shares. So before proceeding to discuss these methods, it is better to have an idea regarding the valuation of preference shares.

Valuation of preference shares. In the case of non-participating preference shares, the value of the share is just equal to paid-up value provided the assets are sufficient to return the preference share capital. In case the dividend is outstanding, the value should be increased by the amount of such dividend.

In the case of participating preference shares any surplus remaining after paying all the shareholders will be distributed among the two categories of shareholders in the ratio of the paid-up amounts of equity and preference capitals. Therefore while valuing the preference share such surplus should be added to the paid-up value. Alternatively the net assets available to both categories of shareholders will be distributed in the ratio of paid-up amounts of equity and preference capitals. Then the value of one preference share is obtained by dividing the share of preference shareholders by the number of preference shares. (See Illustration 110).

Valuation of Equity shares

Net asset method. This method is also called net intrinsic value method or break-up value *method*. This method aims at finding out the possible value of share *in the event* the company goes into *liquidation*. In fact, this method is a pessimistic approach to the company's prospects of continuing in the future. Since this method makes a necessary assumption of a situation (*i.e.*, *liquidation*, it starts with the market value of assets at which assets will be *sold if* the liquidation takes place. Then from the total assumed *realisable* values of assets the amount of creditors, debentureholders, other liabilities are deducted (because they must be paid in the event of liquidation). It is further reduced by the paid-up value of preference share *capital* because that must also be paid in full in priority over the equity *capital*. The *remaining amount* is assumed to be available to equity shareholders. If this amount is divided by the

number of equity shares, value per share can be found out. Thus it can be written as under :

NET ASSET METHOD OF VALUING SHARES

Assets at market value :		Rs.
Goodwill		....
Land		....
Buildings		....
Plant		....
Furniture		....
Stock		....
Debtors		....
Bills Receivable		....
Cash and bank		....
Total proceeds	Rs.	xxx
Less Payments in the event of liquidation :		
Debentures	....	
Creditors	....	
Other liabilities	....	
		xxx
Remaining balance	Rs.	xxx
Less Preference shares		....
Balance available for Equity Shareholders	Rs.	xxx

$\therefore$ Value per equity share $= \dfrac{\text{Amount available}}{\text{Number of equity shares}}$

It may be mentioned here that alternatively the value of equity share by this method can be ascertained as given below :

		Rs.
Equity share capital		....
Reserves		....
Other surpluses		....
Profit on revaluation		....
Gross Equity		xxx
Less :		
Loss on revaluation	....	
Miscellaneous expenditure and losses	....	xxx
Net Equity	Rs.	xxx

Value per equity share $= \dfrac{\text{Net Equit}}{\text{No. of equit}}$

Yield method. Under this method the [illegible] f sha by comparing the expected rate of return w [illegible] to

the expected rate of return is more than the normal rate of return, the paid up value of the share increases proportionately and the resulting value is called the market value of the share. On the other hand if the expected rate of return is lower than the normal rate of return the market value of the share will be less than its paid-up amount. For example, for a share of Rs. 100 paid-up, if the normal rate of return is 10% and the expected rate of return is 15%, its market value will be Rs. 150. On the other hand if the expected rate of return is 5%, its market value will be Rs. 50 only. One can apply the following formula :

$$\frac{\text{Expected rate of return}}{\text{Normal rate of return}} \times \text{Paid up amount per share.}$$

Expected rate of return can be calculated by applying the formula,

$$\frac{\text{Profits available for equity dividend}}{\text{Paid-up equity share capital}} \times 100.$$

In calculating the profits available for equity dividend one should take into account, payment of taxes, reasonable transfers to general reserves and debenture redemption funds.

The market value of share can also be calculated by the following formula :

$$\frac{\text{Dividend (in rupees) per share}}{\text{Normal rate of return}} \times 100.$$

As 100 divided by Normal rate of return is termed as P.E. Ratio (Price-earnings ratio) the formula may also be modified as,

Dividend (in rupees) per share × P.E. Ratio

Price-earnings ratio is very popular in U.K. and U.S.A. and it is a convenient way of expressing the expectation of the investors. This ratio indicates the relationship of the earnings per share to the price of the share prevalent on the stock exchange. So this ratio in practice is obtained by dividing the price of the share by the earnings per share. From this it follows that earnings per share multiplied by P.E. Ratio will result in market value of share. The relationship stated above can be expressed conveniently in the form of the following formula :

$$\text{P.E. Ratio} = \frac{\text{Market value of share}}{\text{Earnings per share}}$$

$\therefore$ Market value of share = P.E. Ratio × Earnings per share.

At this stage it may be profitable to discuss once again the relationship between the P.E. Ratio and normal rate of return. In the above discussion two different formulae are given to calculate P.E. Ratio. They are:

(1) $\text{P.E. Ratio} = \frac{100}{\text{Normal rate of return}}$

(2) $\text{P.E. Ratio} = \frac{\text{Market value of share}}{\text{Earnings per share}}$

These two formulae are really one and the same. For a typical company the market price paid by the investor will be such that the dividend received will give them a normal rate of return:

$\therefore$ Normal rate of return $= \dfrac{\text{Dividend (in rupees)}}{\text{Market price}} \times 100$*

Let us take the example of a share of a company whose market price is Rs. 150 and which declares a dividend of 30% on its paid up value of Rs. 100. Then its normal rate of return

$$= \frac{\text{Rs. } 30}{\text{Rs. } 150} \times 100 = 20\%^{*}$$

Applying the first formula,

$$\text{P.E. Ratio} = \frac{100}{20} = 5$$

This can also be calculated directly by the second formula.

$$\text{P.E. Ratio} = \frac{\text{Rs. } 150}{\text{Rs. } 30} = 5$$

Thus, it is clear that both the formulae are based on the same relationship, although they are differently stated.

P.E. Ratio changes from industry to industry because of the investor's expectations. For industries with high risk, investors expect a high normal rate of return and, therefore, the P.E. Ratio will be low for such industries. On the other hand, for industries with low risk, normal rate of return will be low and P.E. Ratio will be high.

Evaluation of yield method. In calculation [illegible]

continue to operate the business. This approach of valuation of share is optimistic and therefore better than the previous one. Moreover, an investor who wishes to buy a share is more concerned with the yield rather than what he can obtain in the event of company's liquidation. So this, apart from being optimistic, is also realistic in its approach. It is also realistic for another reason. To calculate the intrinsic value, one needs the market values of assets and liabilities which are not easy to procure. Whereas all the data that are needed to calculate the yield value can be had from published sources.

However, this method also suffers from certain disadvantages. Under this method although expected rate of return is to be calculated [illegible]

are two companies having the same capital structure, the same profits, but one company paying a higher dividend than the other, the shares of the

*It is based on this formula, we have given the market price formula as

$$\frac{\text{Dividend (in rupees)}}{\text{Normal rate of return}} \times 100$$

In the example given above

$$\text{Market Price} = \frac{\text{Rs. } 30}{20} \times 100 = \text{Rs. } 150$$

first company will be valued higher than those of the second company. In other words, shares of companies which observe financial prudence by building up good reserves will be valued less, whereas the shares of companies which distribute large profits will be valued more. No doubt a buyer who wishes to hold the share for a short term takes into account the rate of dividend declared by the company in valuing the share, but this method gives too much weightage to this factor. Therefore, earning capacity method discussed below appears to be a better one, particularly for those who want to acquire shares with a view to acquire controlling interest in the investee company.

Another difficulty is the calculation of normal rate of return. The normal rate of return applicable to the industry is to be adjusted in the light of the following considerations :

(*i*) *Restrictions on the transfer of shares*—the more the restriction, the more is the disability attached to the share and in order to compensate the disadvantage the normally expected rate in the industry is to be *increased* a little for that particular company, (say) by ½%.

(*ii*) *Other disability* like partly called up share will further *increase* the normal rate of dividend (say) by ½%.

(*iii*) *Sound finance decisions* like policy of transferring a part of profit to general reserve every year ; sound assets backing, *i.e.*, high intrinsic value of assets ; regularity in paying dividend ; and maintaining a constant rate of dividend all go to increase the confidence of shareholders and a little lower normal rate of dividend becomes acceptable to them.

Although the concept of calculating and adjusting the normal rate of return appears to be clear, in practice, only persons who are very shrewd and are conversant with the industry in general and the unit in particular will be capable of determining this.

Earning capacity method. As stated earlier for valuing minority holdings, the average rate of dividends declared in the previous years is a sufficient guide to calculate the market value of shares But when some one is interested in acquiring a majority holding with a view to have the control, he is not so much interested in the declared rate of dividend as much for the rate of earning of the company. As a majority shareholder he is more interested in the disposable profits which comprise after tax profits, less the usual amounts set aside towards reserves. He calculates the rate of earning and applies the following formula to calculate the value of share :

$$\frac{\text{Rate of earning}}{\text{Normal rate of return}} \times \text{Paid-up value per share}$$

The rate of earning is usually calculated by taking into account the total capital employed including long-term borrowings. There are several reasons for this. They are : (*a*) Profits earned are on account of the total capital employed and not merely the paid-up equity capital ; (*b*) There is possibility of enlarging the capital by the capitalisation of reserves ; (*c*) Companies issue convertiable debentures which are later converted into equity shares. Since the total capital is taken into account, naturally, profits to be considered are before debenture interest and preference divi-

dend but after tax. Once these two basic figures are ascertained

$$\text{Rate of earning} = \frac{\text{Profit earned}}{\text{Capital employed}} \times 100$$

Because of the difficulties in calculating the capital employed, in practice the rate of earnings is calculated by taking into account the profits available for equity shareholders and the equity share capital only. In [illegible] shareholders, taxes and pre- [illegible] Other amounts to be deducted [illegible] abnormal items which are not likely to recur.

There is an alternative method of calculating the market value of share based on earning capacity of the company. Under this method, profits available to equity shareholders as calculated above are capitalized on the basis of normal rate of return. Then the value of one equity share is obtained by dividing the capitalized value by number of equity shares.

Fair value of a share. Fair value of a share is the simple average of intrinsic value and yield value (market value) of such a share.

$$\text{Fair Value} = \frac{\text{Intrinsic value} + \text{Yield value}}{2}$$

Valuation of shares for wealth-tax. For the purpose of determining the wealth of a person shares held by such a person will have to be valued In the case of quoted shares, there is no problem whatsoever, because such shares can be valued on the basis of the closing price quoted on the stock exchange on the valuation date. If quotation is not available on the valuation date, the price on the date nearest to the valuation date can be adopted. As regards unquoted shares, in the absence of any specific rules there can be disputes between the authorities and the assessee on this question of valuation. To avoid such disputes rules 1-C and 1-D of the wealth-tax rules clearly lay down the procedure for valuing unquoted shares.

Valuation of unquoted preference shares In the case of preference shares a return of 8% is taken as normal and therefore, they are divided into two categories (1) Preference shares carrying less than 8% dividend; and (2) Preference shares with 8% dividend and more. In the case of first category, the paid-up value is adjusted on the basis of the following formula :

$$\text{Paid-up Value} \times \frac{\text{Rate at which dividend is payable}}{\text{8 per cent}}$$

Thus preference shares carrying 6% dividend will be taken at [illegible] paid-up value for valuation purpose. In the case of second [illegible] value is equal to the paid-up value of such shares.

Valuation of unquoted equity shares. In the case of [illegible] shares companies other than investment companies and [illegible] companies, the value is taken at 5% of the break-up of [illegible] break-up value is based on the balance sheet as drawn [illegible] date

Valuation after bonus issue. After the bonus issuethere will be an increase in the number of equity shares but without any increase in the available net assets to the equity shareholders. Therefore, the intrinsic value of an equity share will be less after the bonus issue.

Valuation of shares for estate duty. For the purpose of valuation under Estate Duty Act, companies have been divided into three categories. They are :

(1) Public companies with freely transferable shares (2) Private companies with restrictions on transfers and, (3) Controlled companies.

Quoted shares of public companies are valued on the basis of stock exchange quotations as on the date of the deceased's death. In the case of other companies the value is determined by a qualified broker or the secretary of a company on the basis of transaction taking place on or about the date of death. If there are no such transactions, the value is determined on yield basis with reference to the dividends declared for recent years.

In the case of private companies the valuation must be, as far as possible, on the basis of the net assets of the company. If that is not practicable then the value is to be taken at what they would fetch if they could be sold in the open market on the terms of the purchaser being entitled to be registered as holder subject to articles.

In the case of a controlled company valuation must be only on the net assets basis. A controlled company is a company which at any time, before the death of a shareholder, was under the control of not more than five persons and which is not a subsidiary company or a company in which the public are substantially interested.

Illustration 112. (Net assets method)

From the following balance sheet you are required to value the equity share :

	Rs		Rs.
2,000 6% preference shares of Rs. 100 each	2,00,000	Assets at book value	6,00,000
30,000 equity shares of Rs 10 each	3,00,000		
Liabilities	1,00,000		
Rs.	6,00,000	Rs.	6,00,000

The market value of $\frac{1}{2}$ of the assets is considered at 10% more than the book value and that of remaining $\frac{1}{2}$ at 5% less than the book value. There was a liability of Rs. 5,000 which remained unrecorded. Assume preference shares have no priority as to repayment of capital or dividend.

Solution.

	Rs.	Rs.
Assets at book value (first half)	3,00,000	
Add 10% increase	30,000	
		3,30,000

Assets at book value (next half)	3,00,000	
Less 5% decrease	15,000	
		2,85,000
Market value of assets		6,15,000
Less Liabilities as per books	1,00,000	
Liabilities under-recorded	5,000	
		1,05,000
Net Assets available for equity and preference shares		5,10,000

The amount is first to be divided in the ratio of their paid-up capital, *i.e.*, 2 : 3. Thus the amount available to preference shareholders is 2/5×Rs. 5,10,000, *i.e.*, Rs. 2,04,000; and amount available to equity shareholders is 3/5×Rs. 5,10,000, *i.e.*, Rs. 3,06,000.

Therefore value per share is :

(*a*) Preference share $\frac{2,04,000}{2,000}$ = Rs. 102 ; and

(*b*) Equity share $\frac{3,06,000}{30,000}$ = Rs. 10 20

Illustration 113. (Net assets method)

The following is the balance sheet of...Company Ltd. as on 31st March, 1970 :

	Rs.		Rs.
Share capital		Fixed assets	4,00,000
6% Preference share capital of Rs 10 each fully paid	2,00,000	Current assets	2,48,000
Equity shares of Rs. 10 each fully paid	3,00,000	Preliminary expenses	10,000
General Reserve	5,000	Unwritten off discount	5,000
Debenture redemption fund	25,000	Profit and loss account	27,000
Investment fluctuation fund	10,000		
5% Debentures	50,000		
Depreciation fund	10,000		
Sundry creditors	90,000		
	Rs 6,90,000		Rs. 69,0,000

Current assets included investments Rs. 50,000 market price of which is Rs. 48,000. Debtors included in current assets are doubtful to the extent of Rs. 5,000 for which no provision has been made so far. Stock at the end did not include a return of Rs. 1,000, though transaction was properly recorded and posted.

Debenture interest is owing for one year and preference dividends are in arrear for two years. Assuming other assets are worth book value, you are required to value the shares if :

(*a*) Preference shares have priority both as to the payment of capital and arrears of dividend in the event liquidation takes place ; (*b*) Preference shares have no priority as capital and arrear of dividend ; (*c*) Preference

shares have priority as to the payment of capital only ; (*d*) Preference shares have priority as to the payment of arrear of dividend only.

Solution.

1. *Calculation of net assets*

	Rs.	Rs.
Assets :		
Fixed assets as per book values	4,00,000	
Less Depreciation	10,000	
		3,90,000
Current assets		2,48,000
		6,38,000
Less Fall in value of investments	2,000	
Provision for doubtful debts	5,000	
		7,000
		6,31,000
Add Increase in the value of stock at the end		1,000
Total assets		6,32,000
Less Liabilities :		
5% Debentures	50,000	
Sundry creditors	90,000	
Interest on debentures for one year	2,500	
		1,42,500
Net assets		4,89,500

2. *Calculation of value of shares :*

(*a*) *When preference shares have priority as to repayment of capital as well as dividend :*

Net assets as per (1) above		4,89,500
Less Preference capital	2,00,000	
Preference dividend for 2 years	24,000	
		2,24,000
Intrinsic value of equity shares		Rs. 2,65,500

$\therefore$ Value per share $= \dfrac{2,65,500}{30,000} = 8{\cdot}85$

(*b*) *When preference shares have no priority at all :*

Net assets as per (1) available for equity and preference share capitals	4,89,500

$\therefore$ Value per share $= \dfrac{4,89,500}{20,000+30,000} = 9{\cdot}79$

(c) *When preference shares have priority as to the payment of capital only :*

Net assets as per (1) above	4,89,500
Less Preference capital.	2,00,000
Amount available for equity share capital	Rs. 2,89,500

$\therefore$ Value per equity share $= \frac{2,89,500}{20,000} = 14{\cdot}475$ 9.65/-

(d) *When preference shares have priority as to the payment of dividend only :*

Net assets as per (1) above	4,89,500
Less Preference dividends for 2 years	24,000
Balance available for equity and preference capital	Rs. 4,65,500

$\therefore$ Value per share $= \frac{4,65,500}{50,000 \text{ shares}} =$ Rs. 9·31

Illustration 114. (Yield method)

X Ltd. declares dividend at 20% on its Rs. 50 fully paid-up share If normal expected rate in the market is 10%, what shall be the value of a share on yield basis.

Solution.

$$\text{Value of share} = \frac{\text{Expected rate}}{\text{Normal rate}} \times \text{Paid up per share}$$

The dividend the company has been declaring in the previous years shall be expected in the future also. Thus expected rate of dividend in this case may be assumed to be 20%.

$$\text{Value of share} = \frac{20}{10} \times \text{Rs. } 50 = \text{Rs } 100$$

Illustration 115. (Yield method)

X Ltd. has 10,000 equity shares of Rs 10 each, Rs 8 paid and 1,00,000 6% preference shares of Rs 10 each fully paid The company has a practice of transferring 20% of the profit to general reserve every year. If the expected profit (based on past year's performance) before tax is Rs. 2,00,000 and the rate of tax is 50%, you are required to calculate the value of equity share. It may be assumed that normal rate of dividend is 20%.

Solution.

(a) *Calculation of profit available for equity shareholders :*

	Rs.
Expected profit	2,00,000
Less Tax at 50%	[illegible]
Profit after tax	[illegible]
Less Transfer to general reserve at 20%	[illegible]

Profit after general reserve	80,000
Less Preference dividend	60,000
Profit available to equity shareholders	20,000

(*b*) *Calculation of expected rate :*

$$\text{Expected Rate} = \frac{\text{Profit available}}{\text{Total paid up equity capital}} \times 100$$

$$= \frac{20,000}{80,000} \times 100 = 25\%$$

(*c*) *Calculation of value :*

$$\text{Value per share} = \frac{\text{Expected Rate}}{\text{Normal Rate}} \times \text{Paid-up per share} = \frac{25}{20} \times \text{Rs. } 8$$

$$= \text{Rs. } 10 \text{ per share.}$$

Illustration 116. (Earning capacity method)

Mr. Sharewallah holds 12,000 equity shares in Bharat Ltd the nominal and paid-up capital of which consists of :

(*i*) 40,000 equity shares of Re. 1 each.

(*ii*) 10,000 8% preference shares of Re. 1 each.

Note : The preference shares do not participate further in profits.

It is ascertained.

(*a*) the normal annual net profit of such a company is Rs. 12,000 and

(*b*) the normal return by way of dividend on the paid-up value of equity share capital for the type of business carried out by the company is 15 per cent.

Mr. Sharewallah requires you to value his share-holding based upon the above figures. [Adapted from Calcutta B. Com. (Hons.)]

Solution.

		Rs.
Annual net profit as given		12,000
Less Transfer to reserve (say 10%)		1,200
	Balance	10,800
Less Preference dividend at 8% on Rs. 10,000		800
Profits available to equity holders	Rs.	10,000

$$\text{Rate of earning} = \frac{10,000}{40,000} \times 100 = 25\%$$

Normal rate of return as given = 15%

$$\text{Value of each equity share} = \frac{\text{Rate of earning}}{\text{Normal rate of return}} \times \text{paid-up value per share}$$

$$= \frac{25}{15} \times \text{Re. } 1 = \text{Re. } 1\tfrac{2}{3}$$

Hence, the value of Mr. Sharewallah's holding

$$=12{,}000 \times \text{Rs. } 1\tfrac{2}{3} = \text{Rs. } 20{,}000.$$

Illustration 117. (Valuation of minority and majority holdings)

From the data given below pertaining to Success Ltd., calculate the value of shares if (*a*) only a few shares are to be sold and if (*b*) majority shares are to be sold.

(1) Share capital : 1,00,000 shares of Rs. 10 each fully paid.

(2) Profits after tax and dividends :

Year	Profits	Dividend
1976	2,00,000	13%
1977	3,00,000	15%
1978	3,10,000	17%

(3) Normal rate of return 12%.

Solution. (*a*) Only a few shares are to be sold :

$$\text{Average dividend rate} = \frac{13+15+17}{3} = 15\%$$

$$\text{Yield value of each equity share} = \frac{\text{Rate of dividend}}{\text{Normal rate of return}} \times \text{paid-up value of share}$$

$$= \frac{15}{12} \times 10 = \text{Rs. } 12{\cdot}50$$

(*b*) Controlling shares are to be sold :

$$\text{Average profits of the three years} = \frac{2{,}00{,}000+3{,}00{,}000+3{,}10{,}000}{3} = \text{Rs. } 2{,}70{,}000$$

$$\text{Rate of earning} = \frac{2{,}70{,}000}{10{,}00{,}000} = 27\%$$

$$\text{Value of each equity share} = \frac{27}{12} \times \text{Rs. } 10 = \text{Rs. } 22{\cdot}50$$

Illustration 118. (Capitalization of maintainable profits)

Two companies *A* Ltd. and *B* Ltd. are found to be exactly similar as to assets, reserves and liabilities except that their share capital structures are different. The share capital of *A* Ltd. is 11,00,000 divided into 10,000 6% Preference shares of Rs. 100 each and 10,000 equity shares of Rs. 10 each. The share capital of *B* Ltd. is also Rs. 11,00,000 but divided into 1,000 6% preference shares of Rs 100 each and 1,00,000 equity shares of Rs. 10 each. The fair rate of yield in respect of the equity shares of this type of company is ascertained at 8%. The company's profits for 1968 and 1969 are found to be Rs. 1,10,000 and Rs. 1,50,000 respectively.

Calculate the value of the equity shares of each of these two companies on the basis of this information only.

Profit after general reserve	80,000
Less Preference dividend	60,000
Profit available to equity shareholders	20,000

(*b*) *Calculation of expected rate* :

$$\text{Expected Rate} = \frac{\text{Profit available}}{\text{Total paid up equity capital}} \times 100$$

$$= \frac{20,000}{80,000} \times 100 = 25\%$$

(*c*) *Calculation of value* :

$$\text{Value per share} = \frac{\text{Expected Rate}}{\text{Normal Rate}} \times \text{Paid-up per share} = \frac{25}{20} \times \text{Rs. } 8$$

$$= \text{Rs. } 10 \text{ per share.}$$

Illustration 116. (Earning capacity method)

Mr. Sharewallah holds 12,000 equity shares in Bharat Ltd the nominal and paid-up capital of which consists of :

(*i*) 40,000 equity shares of Re. 1 each.

(*ii*) 10,000 8% preference shares of Re. 1 each.

Note : The preference shares do not participate further in profits.

It is ascertained.

(*a*) the normal annual net profit of such a company is Rs. 12,000 ; and

(*b*) the normal return by way of dividend on the paid-up value of equity share capital for the type of business carried out by the company is 15 per cent.

Mr. Sharewallah requires you to value his share-holding based upon the above figures. [Adapted from Calcutta B. Com. (Hons.)]

Solution.

		Rs.
Annual net profit as given		12,000
Less Transfer to reserve (say 10%)		1,200
Balance		10,800
Less Preference dividend at 8% on Rs. 10,000		800
Profits available to equity holders	Rs.	10,000

$$\text{Rate of earning} = \frac{10,000}{40,000} \times 100 = 25\%$$

Normal rate of return as given $= 15\%$

$$\text{Value of each equity share} = \frac{\text{Rate of earning}}{\text{Normal rate of return}} \times \text{paid-up value per share}$$

$$= \frac{25}{15} \times \text{Re. } 1 = \text{Re. } 1\tfrac{2}{3}$$

Hence, the value of Mr. Sharewallah's holding

$$=12{,}000 \times \text{Rs. } 1\tfrac{2}{3} = \text{Rs. } 20{,}000.$$

Illustration 117. (Valuation of minority and majority holdings)

From the data given below pertaining to Success Ltd., calculate the value of shares if (*a*) only a few shares are to be sold and if (*b*) majority shares are to be sold.

(1) Share capital : 1,00,000 shares of Rs. 10 each fully paid.

(2) Profits after tax and dividends :

Year	Profits	Dividend
1976	2,00,000	13%
1977	3,00,000	15%
1978	3,10,000	17%

(3) Normal rate of return 12%.

Solution. (*a*) Only a few shares are to be sold :

$$\text{Average dividend rate} = \frac{13+15+17}{3} = 15\%$$

$$\text{Yield value of each equity share} = \frac{\text{Rate of dividend}}{\text{Normal rate of return}} \times \text{paid-up value of share}$$

$$= \frac{15}{12} \times 10 = \text{Rs. } 12{\cdot}50$$

(*b*) Controlling shares are to be sold :

$$\text{Average profits of the three years} = \frac{2{,}00{,}000+3{,}00{,}000+3{,}10{,}000}{3} = \text{Rs. } 2{,}70{,}000$$

$$\text{Rate of earning} = \frac{2{,}70{,}000}{10{,}00{,}000} = 27\%$$

$$\text{Value of each equity share} = \frac{27}{12} \times \text{Rs. } 10 = \text{Rs. } 22{\cdot}50$$

Illustration 118. (Capitalization of maintainable profits)

Two companies *A* Ltd. and *B* Ltd. are found to be exactly similar as to assets, reserves and liabilities except that their share capital structures are different. The share capital of *A* Ltd. is 11,00,000 divided into 10,000 6% Preference shares of Rs. 100 each and 10,000 equity shares of Rs. [illegible] 11,00,000 but divided into [illegible] 1,00,000 equity shares of R[illegible] of the equity shares of this type of company is ascertained at 8%. The company's profits for 1968 and 1969 are found to be Rs. 1,10,000 and Rs. 1,50,000 respectively.

Calculate the value of the equity shares of each of these two companies on the basis of this information only.

Solution In a problem of this type giving only minimum of information, it is easier to calculate the valuation of share on the basis of capitalization of maintainable profits. Under this method the available profits for equity shareholders are capitalized on the basis of the normal rate of return. Such capitalized value is divided with the number of equity shares to obtain the market value of each share. The workings below will illustrate the method.

(*a*) *Calculation of maintainable profits* :

1968	1,10,000
1969	1,50,000

$$\text{Average profits} = \frac{1,10,000 + 1,50,000}{2} = \text{Rs. } 1,30,000$$

These profits are taken to be after tax and customary transfers to reserves.

(*a*) *Statement of profits available for equity shareholders* :

	A Ltd. Rs.	*B Ltd.* Rs.
Average profits as per (*A*)	1,30,000	1,30,000
Less : Dividend for preference shares at 6%	60,000	6,000
Profit for equity shares	70,000	1,24,000

(*c*) *Statement of capitalization* :

	A Ltd. Rs.	*B Ltd.* Rs.
Profit available for equity shares	70,000	1,24,000
Normal rate of return	8%	8%
Capitalized value of maintainable profits	$70,000 \times \frac{100}{8}$	$1,24,000 \times \frac{100}{8}$
	=8,75,000	=15,50,000

(*d*) *Statement of valuation of shares* :

	A Ltd. Rs.	*B Ltd.* Rs.
Capitalized value of profits	8,75,000	15,50,000
Number of equity shares	10,000	1,00,000
Value of each share	$\frac{8,75,000}{10,000}$	$\frac{15,50,000}{1,00,000}$
	=Rs. 87·50	=Rs. 15·50

Tutorial Note : The problem is illustrative of the effect of high and low capital gearing on equity share values. *A* Ltd. with high capital gearing has better market valuation for its shares than *B* Ltd. with low capital gearing.

Illustration 119. (Fair value of shares)

The following particulars are available in relation to a company :

(*a*) Capital : 450, 6% preference shares of Rs. 100 each fully paid.
4,500 equity shares of Rs. 10 each fully paid.

(*b*) External liabilities Rs. 7,500.

(*c*) Reserves and surplus Rs. 3,500.

(*d*) The average normal profit (after taxation) earned every year by the company Rs. 8,505

(*e*) The normal profit earned on the market value of equity shares, fully paid, of the same type of companies is 9%.

Calculate the fair value of share assuming that out of the total, assets worth Rs. 350 are fictitious.

[Adopted from B. Com. (Hons) Calcutta 1977]

Solution.

A. Intrinsic value of shares :

Gross assets will be equal to capital reserves and surplus and liabilities.

	Rs.	Rs.
Capital :		
Preference share capital	45,000	
Equity share capital	45,000	
		90,000
Reserves and surplus		3,500
Liabilities		7,500
Gross assets		1,01,000

Gross assets as per above		1,01,000
Less Fictitious assets	350	
,, Liabilities	7,500	7,850
Assets available to shareholders		93,150
Less amount due to preference shareholders		45,000
Net assets available to equity shareholders		Rs. 48,150

$$\text{Intrinsic value of share} = \frac{48,150}{4,500} = \text{Rs } 10{\cdot}70$$

Market value by capitalization of profits .

	Rs.
Average profits (after tax)	8,505
Less preference dividend	2,700
	5,805
Less transfer to reserves, say,	945
Profits available to equity shareholders	4,860

$$\text{Capitalized value of Rs. 4,860 at } 9\% = \frac{4,860}{9} \times 100 = \text{Rs. } 54,000$$

$$\text{Value of one equity share} = \frac{54,000}{4,500} = 12$$

$$\text{Fair value of share} = \frac{10{\cdot}70 + 12{\cdot}00}{2} = \text{Rs. } 11{\cdot}35$$

Illustration 120. River Limited and Lake Limited having agreed on a closer trading association decided that each company should acquire (as on 31st December, 1963) a minority interest in the other by an exchange of new shares to be issued for the purpose.

The shares of River Limited (which had a subsidiary, Stream Ltd.) were quoted on a stock exchange. The shares of Lake Ltd. were unquoted.

As an initial step towards reaching final agreement on the values of the shares for the purpose of exchange, values of the underlying assets in each of the companies were agreed and it was decided to make two calculations :

(1) *to calculate the value of existing shares in River Ltd. and Lake Ltd. on the basis of the agreed values of the underlying net assets, and*

(2) to calculate an estimated market value of Lake Ltd. shares on the assumption that such value would be arrived at on the basis that :

(*i*) the maintainable annual profit would be Rs. 17,500, of which Rs. 14,000 would be distributed as dividend, and

(*ii*) an investor would require a dividend yield of 7$\frac{1}{4}$% if the dividend were covered 1$\frac{1}{2}$ times by earnings and the issued capital covered as to 75% by net tangible assets (to be taken at the agreed values). To adjust for variation of the actual cover from that stipulated, it was agreed that the basic required dividend yield of 7$\frac{1}{4}$% should be increased or reduced according to the following scale at the rate of 1% for 100% earnings cover of dividend and at the rate of $\frac{1}{2}$% for 75% of assets cover of issued capital.

The balance sheets of the companies as on 31st December, 1963, and the agreed values of the assets may be summarised as follows :

	River Ltd.		Stream Ltd.		Lake Ltd.	
	Balance sheet Rs.	*Agreed Value* Rs.	*Balance Sheet* Rs.	*Agreed Value* Rs.	*Balance Sheet* Rs.	*Agreed Value* Rs.
Capital and liabilities :						
Authorised capital	1,50,000	—	50,000	—	1,00,000	—
Issued capital in shares of Re 1 each fully paid	80,000	—	40,000	—	60,000	—
Revenue reserves	57,000	—	21,000	—	27,000	—
Current liabilities	61,000	—	12,000	—	30,000	—
Proposed dividend	10,000	—	8,000	—	—	—
Rs.	2,08,000		81,000		1,17,000	

Assets :						
Freeholds	38,000	57,000	—	—	20,000	30,000
Other fixed assets	45,000	37,000	14,000	21,000	26,000	18,000
Goodwill	13,000	22,000	15,000	6,000	12,000	47,000
Current assets	77,000	79,000	52,000	49,000	59,000	72,000
30,000 shares in Stream Limited at cost	35,000	—	—	—	—	—
Rs.	2,08,000		81,000		1,17,000	

No credit has been taken in the accounts of River Ltd for the proposed dividend receivable from Stream Ltd.

You are required to prepare : (*a*) a statement showing the value per share of the existing shares of each company on the basis of the agreed value of the underlying net assets, and (*b*) a computation of the estimated market value of the existing shares of Lake Ltd. For the purpose of your answer you are to ignore any possible effect of the proposed exchange on the value of the existing shares. Ignore taxation. (C.A. Final)

Solution.

River Ltd. and Lake Ltd.

STATEMENNT SHOWING ASSETS VALUE OF SHARES

	Stream Ltd.		River Ltd.		Lake Ltd.	
	Rs	Rs.	Rs.	Rs.	Rs	Rs
Assets at agreed value :						
Goodwill		6,000		22,000		47,000
Freeholds	—		57,000		30,000	
Other Fixed assets	21,000		37,000		18,000	
Current assets	49,000		79,000		72,000	
	70,000		1,73,000		1,20,000	
Less Current liabilities	12,200	58,000	61,000	1,12,000	30,000	90 000
Value of 40,000 Re 1 shares in Stream Ltd.		64,000				
Value of 30,000 shares in Stream Ltd held by River Ltd. $\left[\frac{30,000}{40,000}\times 64,000\right]$				48,000		
Value of underlying net assets				1,62,000		1,37,000
Number of shares issued				50,000		60,000
				Rs P		P
Value per share cum div				2 23		
Dividend proposed for 1963				0 13		
Value per share ex div				2 [illegible]		

$$\text{Capitalized value of Rs. 4,860 at } 9\% = \frac{4{,}860}{9} \times 100 = \text{Rs. } 54{,}000$$

$$\text{Value of one equity share} = \frac{54{,}000}{4{,}500} = 12$$

$$\text{Fair value of share} = \frac{10{\cdot}70 + 12{\cdot}00}{2} = \text{Rs. } 11{\cdot}35$$

Illustration 120. River Limited and Lake Limited having agreed on a closer trading association decided that each company should acquire (as on 31st December, 1963) a minority interest in the other by an exchange of new shares to be issued for the purpose.

The shares of River Limited (which had a subsidiary, Stream Ltd.) were quoted on a stock exchange. The shares of Lake Ltd. were unquoted.

As an initial step towards reaching final agreement on the values of the shares for the purpose of exchange, values of the underlying assets in each of the companies were agreed and it was decided to make two calculations :

(1) to calculate the value of existing shares in River Ltd. and Lake Ltd. on the basis of the agreed values of the underlying net assets, and

(2) to calculate an estimated market value of Lake Ltd. shares on the assumption that such value would be arrived at on the basis that :

(*i*) the maintainable annual profit would be Rs. 17,500, of which Rs. 14,000 would be distributed as dividend, and

(*ii*) an investor would require a dividend yield of $7\frac{1}{4}\%$ if the dividend were covered $1\frac{1}{2}$ times by earnings and the issued capital covered as to 75% by net tangible assets (to be taken at the agreed values). To adjust for variation of the actual cover from that stipulated, it was agreed that the basic required dividend yield of $7\frac{1}{4}\%$ should be increased or reduced according to the following scale at the rate of 1% for 100% earnings cover of dividend and at the rate of $\frac{1}{2}\%$ for 75% of assets cover of issued capital.

The balance sheets of the companies as on 31st December, 1963, and the agreed values of the assets may be summarised as follows :

	River Ltd.		Stream Ltd.		Lake Ltd.	
	Balance [illegible]	*Agreed [illegible]*	*Balance Sheet* Rs.	*Agreed Value* Rs.	*Balance She[illegible]* Rs.	
Capital and liabilities :						
Authorised capital	1,50,0[illegible]			—	1,00,000	
Issued capital in shares of Re 1 each fully paid	80,000				60,000	
Revenue reserves	57,000	–			27,000	–
Current liabilities	61,000	—			30,000	—
Proposed dividend	10,000	—			—	—
Rs	2,08,000				,17,000	

Assets :						
Freeholds	38,000	57,000	—	—	20,000	30,000
Other fixed assets	45,000	37,000	14,000	21,000	26,000	18,000
Goodwill	13,000	22,000	15,000	6,000	12,000	47,000
Current assets	77,000	79,000	52,000	49,000	59,000	72,000
30,000 shares in Stream Limited at cost	35,000	—	—	—	—	—
Rs.	2,08,000		81,000		1,17,000	

No credit has been taken in the accounts of River Ltd for the proposed dividend receivable from Stream Ltd.

You are required to prepare : (*a*) a statement showing the value per share of the existing shares of each company on the basis of the agreed value of the underlying net assets, and (*b*) a computation of the estimated market value of the existing shares of Lake Ltd. For the purpose of your answer you are to ignore any possible effect of the proposed exchange on the value of the existing shares. Ignore taxation. (C.A. Final)

Solution.

River Ltd. and Lake Ltd

STATEMENNT SHOWING ASSETS VALUE OF SHARES

	Stream Ltd.		River Ltd.		Lake Ltd	
	Rs.	Rs.	Rs	Rs.	Rs.	Rs.
Assets at agreed value :						
Goodwill		6,000		22,000		47,000
Freeholds	—		57,000		30,000	
Other Fixed assets	21,000		37,000		18,000	
Current assets	49,000		79,000		72,000	
	70,000		1,73,000		1,20,000	
Less Current liabilities	12,200	58,000	61,000	1,12,000	30,000	90 000
Value of 40,000 Re 1 shares in Stream Ltd.		64,000				
Value of 30,000 shares in Stream Ltd. held by River Ltd. $\left[\frac{30,000}{40,000}\times 64,000\right]$				48,000		
Value of underlying net assets				1,82,000		1,37,000
Number of shares issued				80,000		60 000
				Rs P		Rs P
Value per share cum div.				2 28		2 29
Dividend proposed for 1963				0 13		NIL
Value per share ex. div				2 15		2 29

$$\text{Capitalized value of Rs. 4,860 at } 9\% = \frac{4,860}{9} \times 100 = \text{Rs. } 54,000$$

$$\text{Value of one equity share} = \frac{54,000}{4,500} = 12$$

$$\text{Fair value of share} = \frac{10 \cdot 70 + 12 \cdot 00}{2} = \text{Rs. } 11 \cdot 35$$

Illustration 120. River Limited and Lake Limited having agreed on a closer trading association decided that each company should acquire (as on 31st December, 1963) a minority interest in the other by an exchange of new shares to be issued for the purpose.

The shares of River Limited (which had a subsidiary, Stream Ltd.) were quoted on a stock exchange. The shares of Lake Ltd. were unquoted.

As an initial step towards reaching final agreement on the values of the shares for the purpose of exchange, values of the underlying assets in each of the companies were agreed and it was decided to make two calculations :

(1) to calculate the value of existing shares in River Ltd. and Lake Ltd. on the basis of the agreed values of the underlying net assets, and

(2) to calculate an estimated market value of Lake Ltd. shares on the assumption that such value would be arrived at on the basis that :

(*i*) the maintainable annual profit would be Rs. 17,500, of which Rs. 14,000 would be distributed as dividend, and

(*ii*) an investor would require a dividend yield of $7\frac{1}{4}\%$ if the dividend were covered $1\frac{1}{2}$ times by earnings and the issued capital covered as to 75% by net tangible assets (to be taken at the agreed values). To adjust for variation of the actual cover from that stipulated, it was agreed that the basic required dividend yield of $7\frac{1}{4}\%$ should be increased or reduced according to the following scale at the rate of 1% for 100% earnings cover of dividend and at the rate of $\frac{1}{2}\%$ for 75% of assets cover of issued capital.

The balance sheets of the companies as on 31st December, 1963, and the agreed values of the assets may be summarised as follows :

	River Ltd.		Stream Ltd.		Lake Ltd.	
	Balance sheet Rs.	*Agreed Value* Rs.	*Balance Sheet* Rs.	*Agreed Value* Rs.	*Balance Sheet* Rs.	*Agreed Value* Rs.
Capital and liabilities :						
Authorised capital	1,50,000	—	50,000	—	1,00,000	—
Issued capital in shares of Re. 1 each fully paid	80,000	—	40,000	—	60,000	—
Revenue reserves	57,000	—	21,000	—	27,000	—
Current liabilities	61,000	—	12,000	—	30,000	—
Proposed dividend	10,000	—	8,000	—	—	—
Rs	2,05,000		81,000		1,17,000	

Assets :						
Freeholds	38,000	57,000	—	—	20,000	30,000
Other fixed assets	45,000	37,000	14,000	21,000	26,000	18,000
Goodwill	13,000	22,000	15,000	6,000	12,000	47,000
Current assets	77,000	79,000	52,000	49,000	59,000	72,000
30,000 shares in Stream Limited at cost	35,000	—	—	—	—	—
Rs.	2,08,000		81,000		1,17,000	

No credit has been taken in the accounts of River Ltd for the proposed dividend receivable from Stream Ltd.

You are required to prepare: (*a*) a statement showing the value per share of the existing shares of each company on the basis of the agreed value of the underlying net assets, and (*b*) a computation of the estimated market value of the existing shares of Lake Ltd. For the purpose of your answer you are to ignore any possible effect of the proposed exchange on the value of the existing shares. Ignore taxation. (C.A. Final)

Solution.

River Ltd. and Lake Ltd.

STATEMENNT SHOWING ASSETS VALUE OF SHARES

	Stream Ltd.		River Ltd		Lake Ltd	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Assets at agreed value :						
Goodwill		6,000		22,000		47,000
Freeholds	—		57,000		30,000	
Other Fixed assets	21,000		37,000		18,000	
Current assets	49,000		79,000		72,000	
	70,000		1,73,000		1,20,000	
Less Current liabilities	12,200	58,000	61,000	1,12,000	30,000	90,000
Value of 40,000 Re 1 shares in Stream Ltd.		64,000				
Value of 30,000 shares in Stream Ltd held by River Ltd. $\left[\frac{30,000}{40,000}\times 64,000\right]$				48,000		
Value of underlying net assets				1,82,000		1,37,000
Number of shares issued				80,000		60,000
				Rs P		Rs P
Value per share cum div.				2 28		[illegible]
Dividend proposed for 1963				0 13		
Value per share ex div				2 15		

(b) COMPUTATION OF THE ESTIMATED MARKET VALUE OF THE EXISTING SHARES OF LAKE LTD.

Net tangible assets	Rs. 90,000	
Issued share capital	Rs. 60,000	
Assets cover—actual	150 per cent	
required	75 " "	
surplus	75 " "	reducing required yield by ½ per cent
Maintainable profit	Rs. 17,500	
Dividend	Rs. 14,000	
Earnings cover—actual	125 per cent	
required	150 " "	
shortage	25 " "	increasing required yield by ¼ per cent

Reduction in required yield of 7¼ per cent ¼ per cent

The required yield is, therefore, 7 per cent, giving a capitalized value of dividend of Rs. 14,000 of Rs. 2,00,000, which is the estimated market value of 60,000 issued Re. 1 shares of Lake Ltd., equivalent to a price of Rs. 3·34 per share.

Illustration 121. The following figures relate to a Company which has Rs. 10,00,000 in equity shares and Rs. 3,00,000 in 9% preference shares, all of Rs. 100 each :

	Average Net Worth (Exaluding investments)	*Adjusted taxed profits*
	Rs.	Rs.
1975	18,60,000	1,90,000
1976	21,50,000	2,10 000
1977	21,90,000	2,50,000

The Company has investments worth Rs. 2,80,000 (at market value) on the valuation date, the yield in respect of which has been excluded in arriving at the adjusted taxed profit figures. It is customary for similar type of companies to set aside 25% of the taxed profit for rehabilitation and replacement purposes. On the valuation date, the net worth (excluding investments) amounts to Rs. 22,50,000. The normal rate of return expected is 9%. The company has paid dividends consistently within a range of 8% to 10% on equity shares over the previous seven years and it expects to maintain the same.

You are required to ascertain the value of each equity share on the basis of productivity, applying suitable weighted averaging.

(C.A. Final Nov. 1978)

Solution. Valuation of share on the basis of productivity is the same as valuation based on earning capacity method.

Rate of Earnings :

Year	*Average networth*	*Adjusted after tax profits*	*Rate of earnings*
1975	18,60,000	1,90,000	10·215
1976	21,50,000	2,10,000	9·77
1977	21,90,000	2,50,000	11·415

ighted average of rate of earnings

$$=\frac{10{\cdot}215\times1+9{\cdot}77\times2+11{\cdot}415\times3}{1+2+3}=10{\cdot}2/3\%$$

Profits available to equity shareholders		
Maintainable profits at 10·2/3% on Rs. 22,50,000		Rs. 2,40,000
Less : Rehabilitation and replacement reserve 25% of profits	Rs. 60,000	
Preference dividends	27,000	87,000
Profits available for equity shareholders		1,53,000

Capitalized value of profits $= \frac{1,53,000}{9}\times 100$

available for eqnity shareholders at 9% $= 17,00,000$

Add value of investments $= 2,80,000$

$19,80,000$

Volue of one equity share $= \frac{19,80,000}{10,000}$

$= \text{Rs. } 198$

Illustration 122 The balance sheet of Sun Ltd. as on 31-12-1978 was as follows :

	Rs. in Lakh		Rs in Lakh
Subscribed & Paid up capital—10,000, 10% cum. preference shares of Rs 10 each	Rs. 1·00	Goodwill at cost ([illegible])	Rs [illegible]
20,000 equity shares of Rs. 10 each	2·00	Freehold land and building (at cost)	[illegible]
Profit & loss account	1·00	Plant at cost	[illegible]
Bank overdraft	2·00	Investment at cost (market value 0·50)	[illegible]
Current liabilities	0·30	Stock at cost	[illegible]
		Debtors	[illegible]
		Bank Balance	[illegible]
	Rs. 6·30		Rs [illegible]

(*a*) Net profits (after writing off goodwill each year by Rs. [illegible]) for the years 1976, 1977 and 1978 amounted to Rs. [illegible], Rs. [illegible], and Rs. 1,10,000 respectively.

(*b*) Company paid dividend on [illegible] equity shares at 10% in 1977 only [illegible] at the figures stated under item (a). [illegible] ing rights.

(*c*) Recent valuation of land [illegible] Rs. 1 lakh, Rs 1 lakh and Rs. 5 lakh [illegible] ings and plant will increase by Rs. [illegible]

(*d*) Worthless stocks [illegible] since 1974 as it is, amounted to Rs. [illegible] thereof Rs. 10,000.

What value would you place [illegible] assets (including goodwill) and [illegible]

profits, which is agreed to be the weighted average net profits (weightage being 1, 2 and 3) of past three years, capitalisation rate being $8\frac{1}{2}$ per cent ? Confine on data given only. Ignore tax.

(Adapted from I.C.W A. Final)

(A) Statemant showing net assets (excluding goodwill) available to equity shareholders.

		Rs.
Land		1,00,000
Buildings		1,00,000
Plant		5,00,000
Investments at market value		50,000
Stock		20,000
Debtors		70,000
Bank balance		30,000
Gross assets (excluding gooodwill)		8,70,000
Less : Liabilities		
Bank overdraft	2,00,000	
Current liabilities	30,000	2,30,000
Net assets		6,40,000
Less : Amount payable to preference shareholde s		1,00,000
Net assets available to equity shareholders		5,40,00C

(B) Valuation on net assets basis.

$$\text{Value of share} = \frac{\text{Net assets available to equity shareholders}}{\text{Number of equity shares}}$$

$$= \frac{5,40,000}{20,000} = \text{Rs. } 27$$

(C) Statement showing capitalised value of maintainable profits.

Adjusted profits Year	*Profits as given*	*Add back goodwill written off*	*Adjusted profits*
1976	28,000	10,000	38,000
1977	65,000	10,000	75,000
1978	1,10,000	10,000	1,20,000

$$\text{Weighted average Profit} = \frac{38,000 \times 1 + 75,000 \times 2 + 1,20,000 \times 3}{3+2+1}$$

$$= \text{Rs. } 98,000$$

Weighted average profit as per above calculation	=	98,000
Less increase in depreciation	=	53,000
Future maintainable profit		45.000
Rate of capitalization	=	$8\frac{1}{2}\%$

Capitalized value of future maintainable profit $= \frac{4,500}{8\frac{1}{3}} \times 100$

$=$Rs. 5,40,000

(D) Valuation on the basis of capitalized value of maintainable profits.

$$\text{Value of share} = \frac{\text{Capitalized Value}}{\text{Number of equity shares}}$$

$$= \frac{\text{Rs. } 5,40,000}{20,000} = \text{Rs. } 27.$$

Illustration 123. The summarised balanse sheet of a private limited company, as on 31st December 1969, is as follows :

Share capital :	Rs	*Fixed Assets :*		Rs.
Authorised, issued and fully paid		Goodwill		10,000
10,000 6% Pref.		Freehold property		25,000
Shares of Re. 1 each	10,000	Plant etc, (20,000—10,000)		10,000
30,000 ordinary shares of				
Re. 1 each	30,000			45,000
Profit and loss account	50,000	Quoted investments		20,000
5% Debentures—1980	20,000	Current assets :		
Sundry creditors	15,950	Stocks	18,000	
		Debtors	19,950	
		Bank balance	23,000	
				60,950
Rs	1,25,950		Rs	1,25,950

The profits of the three years 1967, 1968 and 1969 were Rs 14,700, Rs. 21,500 and Rs. 16,000 respectively, after charging debenture interest but before providing for the preference dividends

The sole shareholder has agreed to sell all the preference shares, which are repayable at par in a liquidation, to a purchaser for Rs. 0 75 a share. He has also agreed to sell all the ordinary shares to another purchaser. The price of the ordinary shares will be calculated, so that the purchaser will obtain a return of 10% on the net physical assets attributable to the ordinary shares, as on 31st December 1969 and in addition pay an amount for goodwill of three times the average super profits (*i.e.*, the profits over the 10%) of the previous three years.

The purchase consideration is to be based on the figures shown in the balance sheet as on 31st December 1969, and on the profits of the previous three years accounts, subject to relevant adjustment in respect of the following matters :

(1) The vendor, with the consent of the purchaser, has agreed with the holder of the debentures that the company will purchase these for cancellation at a discount of 25%.

(2) It has been ascertained that the current rental value of free-hold property is Rs. 3,360 and that it could be sold on the basis of ... return. It is agreed to substitute the relevant value for the book ...

(3) A revenue creditor of Rs. 550 has been omitted from the balance sheet as on 31st December 1969.

(4) The market value of the quoted investments was Rs. 25,000.

(5) 10% of the profit shown in the accounts for 1968 arose from a non-recurring item which, it is agreed, should be eliminated.

(6) A general provision of 5% had been made in 1969 against the debtors, which it is agreed is not now required.

You are required to compute the purchase price of the ordinary shares. Ignore taxation. (C.A. Final, England, 1970)

Solution :

COMPUTATION OF PURCHASE PRICE OF ORDINARY SHARES

Freehold property, Rs. (3,360 × 100/8)	Rs. 42,000
Plant, etc.,	10,000
Quoted investments (market value)	25,000
Stocks	18,000
Debtors, Rs. (19,950 × 100/95)	21,000
Bank, Rs. (23,000 − 15,000)	8,000
	1,24,000
Less Creditors, (Rs. 15,950 + 550)	16,500
	1,07,500
Less Preference shares at par	10,000
Capitalised value of equity interest [10 percent (Rs. 9,750) resonable return]	97,500

Goodwill :

	Profits	*Add debenture interest*	*Creditor omitted*	*Nonrecurring item*	*Provision for bad debts*	*Deduct Preference Dividends*	*Adjusted profit (for ordinary shareholders)*
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1967	14,700	1,000	—	—	—	(600)	15,100
1968	21,500	1,000	—	(2,150)	—	(600)	19,750
1969	16,000	1,000	(500)	—	1,050	(600)	16,900
							3) 51,750
							17,250
	Less 10 per cent (above)						9,750
	Super profits						7,500
	Goodwill (super profits × 3)						7,500 × 3 = Rs. 22,500
							Rs. 1,20,000

Purchase price of ordinary shares, *i.e.*, Rs. 1,20,000 ÷ 30,000 = Rs. 4 per share.

Illustration 124 Janata & Co Ltd was incorporated on 21st April 197[illegible] with an authorised [illegible] 25,00,000 in equity shares of Rs [illegible] ...ity shares for cash at a premium [illegible] There was no business until 30th June, 1976, on which day the company decided to purchase the going business of Swatantra and Co Ltd and Lokdal and Co Ltd by its own shares of Rs. 10 each at a premium of Rs 2·50 per share (Assets and liabilities of both the companies were taken at their book values and their goodwill was valued at 2½ years purchase of super-profits, the normal profits being calculated at 10% of the capital employed in case of each). Summarised balance sheets, as on 30-6 1976 were as follows :

	Swatantra Rs	*Lokdal* Rs		*Swatantra* Rs	*Lokdal* Rs.
Equity shares of Rs 10 each, fully paid	3,10,000	3,35,000	Fixed assets (Other than goodwill)	4,50,000	2,90,00
Profit and loss account	1,90,000	15,000	Current assets	2,50,000	6,10,00
Current Liabilities	2,00,000	3,50,000			
Rs.	7,00,000	9,00,000	Rs.	7,00,000	9,00,00

The trading profits were reported to be as follows :

	Swatantra Rs.	*Lokdal* Rs.
For the year ending 30-6-1974	70,500	[illegible]5,000
,, ,, 30-6-1975	88,000	64,000
,, ,, 30-6-1976	89,000	68,500

Find out the respective rates for exchange of shares and give the journal entries in the books of the Janata & Co Ltd together with the resulting balance-sheet. (B·Com Hons Calcutta 1977

Solution :

(*a*) Statement of capital employed

	Swatantra Rs.	*Lokdal* Rs.
Gross assets as per balance sheet	7,00,000	9,00,000
Less current liabilities as per balance sheet	2,00,000	3,50,000
Net assets or capital employed as on 30-6-1976	5,00,000	3,50,000

(*b*) Statement of average trading profits

	Swatantra	*Lokdal*
For the year ending 30-6-1974	70,500	[illegible]
,, ,, 30-6-1975	88,000	[illegible]
,, ,, 30-6-1976	89,000	[illegible]
Total for three years	2,47,500	[illegible]
Average profits (total divided by 3)	82,500	[illegible]

(c) Statement of goodwill based on super profits

	Swatantra	Lokdal
Average profits as per statement (b)	82,500	62,500
Normal profit at 10% on capital employed as per statement (a)	50,000	35,000
Super profits	32,500	17,500
Goodwill at 2½ years purchase of super profits	81,250	68,750

(d) Statement showing the rate of exchange of shares

	Swatantra Rs.	Lokdal Rs.
Assets acquired :		
Goodwill [as per statement (c)]	81,250	68,750
Fixed assets	4,50,000	2,90,000
Current assets	2,50,000	6,10,000
Gross assets	7,81,250	9,68,750
Less current liabilities	2,00,000	5,50,000
Net assets being the purchase price	5,81,250	4,18,750
No. of shares to be issued, the issue price of Janata & Co Ltd being Rs. 12·50 per share	$\frac{5,81,250}{12.50}$	$\frac{4,18,750}{12.50}$
=	46,500	33,500
Presesent number of shares in the company	31,000	33,500
∴ Ratio of exchange	3 for 2	1 for 1

Tutorial Notes : (1) Normal profits as per the problem are to be calculated at 10% on capital employed. Accordingly the solution is worked out ignoring average capital for this purpose.

(2) Entries in the books of Janata & Co Ltd and the resulting balance sheet are not given as they are not relevant for this chapter.

Illustration 125. Your Client, Brown, has begun to develop an interest in investment matters. He has looked at investments quoted in the daily press, and has made enquiries regarding two companies Adam Ltd and Eve Ltd and comes to you with the following information :

	Adam Ltd Rs.	Eve Ltd Rs.		Adam Ltd Rs.	Eve Ltd Rs.
Ordinary shares of Re. 1 each	10,00,000	20,00,000	Freehold property at valuation	7,00,000	15,00,000
8% Preference shares of Re 1 each	—	10,00,000	Plant at cost less depreciation	4,50,000	32,50,000
Reserves	4,00,000	32,00,000	Stock and work in progress	3,00,000	39,00,000
9% Debentures	—	20,00,000	Debtors	3,50,000	18,00,000
Creditors	3,50,000	12,50,000	Cash	1,10,000	
Taxation	1,60,000	4,00,000			
Bank overdraft	—	6,00,000			
Rs.	19,10,000	1,04,50,000	Rs.	19,10,000	1,04,50,000

SUMMARISED PROFIT AND LOSS ACCOUNT

	Adam Ltd				Eve Ltd			
		1970 Rs.		1971 Rs.		1970 Rs.		1971 Rs.
Turnover		32,00,000		38,00,000		1,90,00,000		2,10,00,000
Profit after charging :		3,00,000		3,60,000		11,50,000		10,25,000
Depreciation	90,000		1,00,000		3,20,000		3,00,000	
Interest	5,000		10,000		2,30,000		1,00,000	
Plant hire	10,000		20,000		—		—	
Corporation tax		1,25,000		1,60,000		4,50,000		4,00,000
		1,75,000		2,00,000		7,00,000		6,25,000
Dividend :								
Preference		—		—	80,000		80,000	
Ordinary		80,000		1,00,000	4,00,000	4,80,000	4,00,000	4,80,000
		95,000		1,00,000		2,20,000		1,45,000

You are also given the following information : (1) The freehold property of Adam Ltd was valued in 1968 and that of Eve Ltd in 1970. (2) Adam Ltd is a light engineering company allied to the U. K. radio industry. Eve Ltd. is engaged in heavy engineering, deriving a substantial part of its business from overseas contracts. (3) 25% of the ordinary capital of Adam Ltd is held by a leading insurance company. 45% of the ordinary capital of Eve Ltd is held by the chairman of the company who is aged sixty-eight. Brown is surprised to see that the quotation of the ordinary shares in both companies is Rs. 2·50. He asks you to comment on the reasons for this position.

You are required to write a letter to Brown giving possible reasons for the position, based on the information given.

(C.A. Final England 1972)

Solution : I have examined the accounts which you sent me relating to Adam Ltd and Eve Ltd. You are, no doubt, concerned with the conspicuous difference between the yields that would be obtained from an investment in these shares at their current market price (which is the same in each case—Rs. 2·50 per Re. 1 share). At this price the 10 per cent dividend paid by Adam Ltd for 1971 yields only 4 per cent on investment whereas the 20 per cent dividend paid by Eve Ltd would return 8 per cent on investment of same amount.

Such a difference in the yields is by no means unusual. The reason for this is that an *investor in ordinary shares is concerned more with the future prospects of the company and with the possibility of rising profits, dividends and capital gains than with a higher but constant immediate return.* A higher return could always be obtained by investment in giltedged or other fixed interest securities but these, however well secured they may be, offer no protection against continued inflation and consequent erosion of the value of money and of fixed interest securities.

I attach a schedule which summarizes the most important figures, ratios and tendencies that are exibited by these accounts and would draw your attention particularly to the following :

Profits and dividends

I have referred already to the dividend yields of 4 and 8 per cent respectively. In the case of Adam Ltd many investors would attach more significance to the price/earnings ratio of $12\frac{1}{2}$ which arises from a comparison of the profits available for the ordinary shareholders with the current market value of whole of ordinary share capital. It shows that the available profits amounted to $\frac{100}{12\frac{1}{2}}$ or 8 per cent on the market value, half of which (4 per cent) has been paid out in dividends while an equal amount has been retained by the company to finance the expansion of its business. The profits so retained are not loss to the shareholders ; they are being used to increase future profits and dividends.

The 8 per cent dividend paid by Eve Ltd. on the other hand has absorbed Rs. 4,00,000 out of the Rs. 5,45,000 profit available after paying the preference dividend. The profits retained are by comparison with the dividends paid insignificant. The profit available was substantially less than in the previous year and although the 1971 dividend has been held at the same rate as for 1970 if the profits continue to decline a reduction in the dividend will be inevitable.

The possibility of a reduction in future dividends payable by Eve Ltd is ascentuated by the capital gearing of that company. Thus, while the profit before interest and corporation tax fell from Rs. 13,70,000 in 1970 to Rs. 12,55,000 in 1971 (a reduction of Rs. 1,15,000 or 8 per cent) the profits available for the ordinary shareholders fell from Rs. 6,20,000 to Rs. 5,45,000 (a reduction of 12 per cent).

In the case of Adam Ltd there are no debentures or preference shares and the whole profit of the company ensures for the benefit of the ordinary shareholders.

Assets and Liabilities

The book values of a company's assets are of secondary importance in their effect on the Stock Exchange quotation of its shares but they demand some attention in that they have some effect on current and future profits

The market value of the Adam Ltd ordinary share capital exceeds the net book value of the company's assets by Rs. 11,00,000 However, its property was last revalued in 1968 and in the ensuing three years may have appreciated in value by a substantial amount. Furthermore, its plant would appear to have a very low book value due to the very high rate at which depreciation has been provided (in 1971 Rs. 1,00,000 on Rs. 5,50,000 or nearly 20 per cent on the written-down value brought forward plus any additions made during the year). In the case of Eve Ltd, on the other hand, the depreciation provion of Rs. 3,00,000 is less than 10 per cent on the corresponding figure of Rs. 35,50,000.

In the case of Adam Ltd, therefore, it seems probable that its fixed assets are undervalued in the balance sheet. Even if they are not and the whole of share market value premium of Rs. 11,00,000 is therefore ascribable to goodwill this is by no means unusual or unsound in relation to the profit record of the company. Indeed the return of 26 per cent which the profits yield on the book value of the assets is itself an indication of a very substantial goodwill value.

The market value of the Eve Ltd ordinary shares is Rs. 2,00,000, less than the net assets attributable to those shares after deducting the prior claims of the holders of debentures and preference shares. This almost certainly indicates that its assets are overvalued. An increased depreciation charge to correct this would reduce the profits further and the 20 per cent ordinary dividend could not be maintained.

Eve Ltd has Rs. 20 lakhs of 9 per cent debentures redeemable in 1975. At current levels of interest on such securities it is unlikely that they could be replaced by a new issue offering less then a $10\frac{1}{2}$ per cent rate of interest and this will make further inroads into the profits.

General Considerations :

Even without the market differences between the figures disclosed in the accounts there are two other important factors which affect the market value of the shares :

(*a*) The future of the heavy engineering industry is not at present regarded very highly whereas the U K radio industry is currently booming. Moreover, light industry is more resilient to change in public demand and thus, if the necessity arose, Adam Ltd would find it easier to enter other markets.

(*b*) The holding of 25 per cent of the share capital of the Adam Ltd by a leading insurance company undoubtedly contributes to the relatively high market value of its shares. Such investors do not take such a large stock in one company unless they have confidence in its management and future prospects. On the other hand the fact that 45 per cent of the ordi-

nary capital of Eve Ltd is held by the chairman who is aged 68, raises the possibility that on his death or retirement a large block of shares will be sold : this prospect tends to depress the market value.

My overall conclusion is that although an investment in Eve Ltd would show a higher return it would be inferior in almost every other respect to an investment in Adam Ltd.

Yours sincerly

	Adam Ltd		*Eve Ltd*	
	Rs. '000	*per cent*	*Rs.'000*	*per cent*
Turnover 1971	3,800		21,000	
Increase over 1970	600	=18¾	2,000	=10½
Profit before corporation tax 1971	360		1,025	
Increase/decrease over 1970	60	=20	—125	=decrease 11
Profit available for ordinary shareholders	200		545	
Increase/decrease over 1970	25	=14	—75	=decrease 12
Dividend on ordinary shares 1971	100	=10	400	=20
Increase over 1970	20	=25	Nil	Nil
Ordinary share capital—nominal	1,000		2,000	
Ordinary share—market value	2,500		5,000	
Dividend return on market value (yield)		=4		=8
P/E Ratio		=12½		=9
Fixed Assets	1,150		4,750	
Current Assets	760		5,700	
	1,910		10,450	
Current liabilities	510		2,250	
Net Assets	1,400		8,200	
Debentures			2,000	
			6,200	
Preference shares			1,000	
	1,400		5,200	
Representing—ordinary shares	Rs. 1,000		Rs. 2,000	
Reserves	400		3,200	
	Rs. 1,400		Rs. 5,200	
Excess/deficiency of market value over book value	1,100	excess	200	deficient
Profit before interest and corporation tax	370		1,255	
Return on net assets		26%		15%

[illegible]

[illegible] at cost less depreciation :

	Rs.	Rs.	Rs.
Freehold buildings		100,000	
Fixture and equipment		15,000	
Delivery vans		5,000	
			1,20,000
Goodwill			50,000
Net current assets :			
Stocks		1,50,000	
Trade debtors		1,30,000	
Balance with bank		18,000	
		2,98,000	
Trade creditors	1,10,000		
Corporation tax	28,000		
Proposed dividend (gross)	30,000	1,68,000	
			1,30,000
		Rs.	3,00,000
Represented by :			
Ordinary share Re. 1 each :			
1,90,000 held by Large		1,90,000	
10,000 held by Small		10,000	
			2,00,000
Revenue reserve : Brought forward			88,000
Balance for year			12,000
		Rs.	3,00,000

During the 5 years ended 31st March, 1969 the trading profit and appropriations have been very consistent and are expected to continue at the present levels. Profits for the year ended 31st March, 1969 were :

	Rs.	Rs.
Trading profit		90,000
Deduct : Directors' remuneration :		
Large	15,000	
Others	3,000	
Depreciation	2,000	
		20,000
		70,000
Corporation tax		28,000
		42,000
Dividend—gross		30,000

You ascertain that :

(1) The freehold buildings have been revalued at Rs. 1,60,000 and could command a rent of Rs. 16,000 p.a. for use in the company's trade.

(2) A company engaged in a similar trade, but of much large size, is shown in the issue of the "Financial Times" dated 31st March, 1969 as having a price/earnings ratio of 8 and a gross dividend yield of 9% p.a.

(3) Large could be effectively replaced by a man earning Rs. 10,000 p.a.

(4) Depreciation and profits shown in the accounts accord closely with the comparative figures in the tax computations, and

(5) Take-over proposals or public issues are not under discussion.

You are required to write a report, supported by figures, giving your opinion of the values, as on 31st March, 1969, of the shares in Plank Ltd held by *(a)* Large, and *(b)* Small. The two holdings are to be offered separately to independent buyers.

You can make whatever assumptions you consider relevant but you should ignore the possible impact on the valuation of income-tax, estate duty and tax on capital gains. Assume the rate of corporation tax to be 40%. **(C.A. Final, England, 1969)**

Solution.

Valuation of shares in Plank Ltd

Dear Sirs,

In accordance with your instructions we have prepared the following valuations of the shareholdings of Messrs Large and Small respectively in the above company. It is understood that the holdings are to be offered to independent buyers.

(*a*) *Shares held by large* :

Calculation of goodwill :

	Rs.	Rs.	Rs.
Adjusted profits :			
Trading profit			90,000
Less Directors' remuneration		13,000	
Depreciation		2,000	
Rent		16,000	
			31,000
			59,000
Corporation tax at 40 per cent			23,600
Adjusted profits			35,400
Net assets as per balance sheet		3,00,000	
Less Freehold buildings at book value	Rs. 1,00,000		
Goodwill	50,000		
		1,50,000	
		Rs. 1,50,000	

Return at, say, 12 per cent	18,000
Super profits	17,400
Goodwill – say, five years' purchase	Rs. 87,000

Total value of Plank Ltd :

Freehold buildings (revalued)	1,60,000	
Goodwill	87,000	
Other fixed assets	20,000	
Net current assets	1,30,000	
	3,97,000	or Rs. 1·985 per share ex-dividend
Proposed dividend	*30,000*	or Rs. 0·*150* per share
	4,27,000	or Rs. 2 135 per share cum. div

Value of shares held by Large :

$\frac{1,90,000}{2,00,000} \times$ Rs 4,27,000 Rs. 4,05,650

[illegible]
(Rs. 35,400). *This compares with a price/earnings ratio of 8 for a quoted* public company engaged in a similar trade, but of much larger size, and is reasonable.

(*b*) *Shares held by Small* :

The value of the shares held by Small may be calculated by comparing the rate of dividend paid (15 per cent) with a reasonable yield of, say, 12 per cent (based upon the 9 per cent yield in respect of the public quoted company), bearing in mind the restricted market which exists for shares in a private company :

15/12 × Rs. 10,000	Rs. 12,500 or Rs. 1·250 per shar ex-div.
Proposed dividend	1,500 or Rs. 0·150 per share
	Rs. 14,000 or Rs. 1·400 per share cum dividend

Dividend cover appears to have been adequate over the past five yaars, while this will increase slightly when Large is replaced. Moreover, the capital of Rs. 2,00,000 is adequately covered by ret tangible assets of Rs. 3,10,000.

Yours faithfully,

......

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'True' or 'False' :

(1) Super profit is the increase in current year profits over the average profits of the preceding three years.

(2) Normal rate of return is the rate of return which investors in general expect on their investments in a particular industry having regard to the prevailing rates of interest and the business and financial risks associated with the investment.

(3) In the calculation of goodwill, past profis will have to be adjusted, in order to determine the future expected profits.

(4) The value of goodwill is directly proportionate to the amount of capital invested in the business.

(5) P.E. Ratio will be high when the risk is high. Likewise it will be low when the risk is low.

(6) In calculating the instrinsic value of share, there is no difference between the equity share and the participating preference share.

(7) Fair value of a share is the weighted average of intrinsic value and yield value.

(8) Normal rate of return and P.E. ratio are one and the same.

(9) For calculating market value of shares one should take into account the rate of earning and not the rate of dividend, if the shares are being acquired for control purpose.

II. Fill up the blanks :

(1) In order to know........value of shares, it is necessary to know the.........of the assets of the company.

(2) If the actual profits are more than the expected normal profits, the difference is termed as......... .

(3) In order to compute goodwill of a firm on the basis of.........it is necessary to know (*i*) average capital, (*ii*) expected normal rate of return and (*iii*) ....

(4) Intrinsic value of share is calculated by dividing the.........of the company by the number of shares.

(5) Fair value of a share is the simple average of.................. value and.........value of a share.

(6) The market value of equity shares is calculated by dividing the ....of maintainable profits by the number of equity shares.

III. Indicate the correct answer.

(1) A business is having adjusted net profits of Rs. 1,00,000 and capital employed Rs. 6,00,000. If goodwill is taken at 3 years' purchase of super-profits and the expected rate of return is 10%, the value of goodwill will be

(*a*) Rs. 3,00,000

(*b*) Rs. 5,00,000

(*c*) Rs. 1,20,000

(2) A company is having 40,000 equity shares of Rs. 12 paid. If the dividend per share is Re. 1 and the expected rate of return is 12% the market value of share will be

(*a*) Rs. 12
(*b*) Rs. 8·33
(*c*) Rs. 10

(3) Which of the following is not concerned with the valuation of goodwill ?

(*a*) Earning capacity method
(*b*) Super profits method
(*c*) Average profits method

(4) For calculating market value using P.E. ratio, it is necessary to know

(*a*) Earning per share
(*b*) Rate of dividend
(*c*) Average profits

(5) When the risk of investment in a particular unit is high, P.E. ratio of that unit

(*a*) will be high
(*b*) will be low
(*c*) will not be affected

(6) The relationship between normal rate of return and P.E. ratio is

(*a*) Inverse
(*b*) direct
(*c*) irregular

Problems

VALUATION OF GOODWILL

1. Examine the factors that affect the valuation of goodwill. Ramesh runs a general store. His net assets on 31st December, 1969 amount of Rs. 20,00,000. After paying a rent of Rs. 20,000 a year a salary of Rs. 10,000 to the manager, he earns a profit of Rs 1,50,000. His landlord is interested in acquiring the business 8% is considered to be a reasonable return on capital employed What can Ramesh expect as payment for goodwill ? (M Com., Kanpur, 1970)

(*Super profit Rs. 10,000 ; Goodwill (say) three years' purchase of super profit Rs. 30,000*)

2. The net profits of a company after providing for taxation, for the past five years, are Rs. 40,000, Rs. 42,000, Rs. 45,000, Rs. 46,000, and Rs. 47,000 The capital employed in the business is Rs. 4,00,000 on which a reasonable rate of return of 10% is expected It is expected that the company will be able to maintain its super profits for the next five years.

... the basis of an
... [illegible] ...ity of one rupee
[illegible]

(b) How would your answer differ if the goodwill is calculated by capitalising the excess of the annual average distributable profits over the reasonable return on capital employed on the basis of the same return of 10%.

(c) Calculate goodwill on 5 years' purchase of super profit.

(Adopted from C. A. Inter.) 31·1

[*Super profit Rs. 4,000 ; Goodwill by annuity method Rs. 15,120 ; Goodwill by capitalization method Rs. 40,000 ; Goodwill on five years' purchase basis Rs. 20,000*]

3. The result at the end of each accounting year of a business is given below :

1973	Profits Rs. 15,000	1975	Profits Rs. 25,000
1974	-do- 18,000	1976	-do- Rs. 30,000

The total assets of the business as per last balance sheet are of Rs. 2,50,000 which include : Land and buildings Rs. 50,000 (market value Rs 60,000) ; Plant and machinery Rs. 98,000 ; Investments (5% Govt. loan held since the starting of business) Rs. 20,000 ; Current assets Rs. 80,000 ; Establishment expenses Rs. 2,000.

The liabilities include, depreciation fund (for land and buildings Rs. 5,000 and for plant and machinery Rs. 8,000) Rs. 13,000 ; other liabilities (excluding owner's funds) Rs. 50,000.

The average of return expected from such business is 10%.

Compute the value of goodwill at three years' purchase of super profits of the business. **(B. Com., Gujarat 1977)**

(*Goodwill Rs. 9.000*)

4. The following is the balance sheet of Mr. Chandy as on Sept, 30, 1969 :

Liabilities	Rs.	*Assets*	Rs.
Capital	1,64,000	Land and buildings	36,000
General reserve	40,000	Plant	54,000
Creditors	38,040	Investments	30,000
		Stock	26,850
		Bank	75,990
		Debtors	19,200
Rs.	2,42,040	Rs.	2,42,040

The following were the net profits for the year ended September 30, 1967, Rs. 32,280, September 30, 1968, Rs. 36,870 and September 30, 1969, Rs. 43,350.

The above amounts include income from investments Rs 1,800 each year.

You are required to value the goodwill of the above business at 2 years' purchase of the average super profit for 3 years, taking into account the fact the standard rate of return on capital employed in such

type of business is 10% and assuming that each year's profit is immediately withdrawn in full by Mr. Chandy. (C.A. Inter., Nov. 1969) 31·3

[*Goodwill on simple average basis Rs. 36,000. Super profit Rs. 18,300 ; when weights are used for calculating average profit, Goodwill Rs. 40,290 ; Super profit = Average profit Rs 37,545 — Normal profit Rs. 17,400*]

[Hints : (1) Capital employed is Rs. 1,74,000 as investments employed outside the business are not treated as capital employed

(2) *Income on investments is deducted from profit of each year before calculating average profit.*

(3) Average profit has been calculated assigning weights. Weights for 1967, 1968 and 1969 are 1, 2 and 3 respectively.]

5. Wise, Clever and Dull were trading in partnership sharing profits and losses 4 : 3 : 3 respectively. The accounts of the firm are made up to 31st December every year.

The partnership provided, inter-alia, that :

On the death of a partner goodwill was to be valued at three years' purchase of average profits of the three years up to the date of death after deducting interest at 8 per cent on capital employed and a fair remuneration of each partner. The profits are assumed to be earned evenly throughout the year.

On 30th June, 1970 Wise died and it was agreed to adjust goodwill in the capital accounts without showing any amount of goodwill in the balance sheet. It was agreed for the purpose of valuation of goodwill that the fair remuneration of work done by each partner would be Rs 15,000 per annum and that the capital employed would be Rs 1,56,000.

Clever and Dull were to continue in partnership, sharing profits and losses equally after the death of Wise.

The following were the amounts of profits of earlier years before charging interest on capital employed

1967 Rs. 67,200 ;	1969 Rs. 72,000
1968 Rs 75,600 ;	1970 Rs 62,400.

You are required to compute the value of goodwill and show the adjustment thereof in the books of the firm. (C.A. (Inter.), May 1971)

(*Average profits Rs 70,800 Super profits Rs 13,320 , Goodwill Rs 39,960*)

6. Under Hill Ltd desirous of selling its business to another company has earned in the past an average profit of Rs 30,000 per annum. It is considered that such average profit fairly represents the profit likely to be earned in the future, except that (*a*) Directors' fees Rs 2,500 charged against such profits will not be payable by the purchasing company whose existing board can easily cope with the additional administrative work at the present fees payable to the directors. (*b*) Rent at Rs 4,500 p.a. which had been paid by the vendor company will not be charged in the future, since the purchasing company owns its own premises and can supply the accommodation necessary for the staff and equipment of the vendor company.

The value of the net tangible assets of the vendor company at the beginning of the year, *i.e.*, 12 months before the date of purchase, was Rs. 3,65,000. It was considered that a reasonable return on capital invested, for the type of company, was 8%. The profits of the vendor company and goodwill existed and was to be paid for on the basis that the vendor company was a continuing enterprise. Calculate the value of 31 4 goodwill.

[*Super profit Rs. 5,600 : Goodwill on capitalisation basis Rs. 70,000 ; Goodwill on three years' purchase of super profit basis Rs. 16,800*]

7. The assets and liabilities of Jameson Company Ltd. as on 31st December, 1977 were as follows :

Liabilities	Rs.	*Assets*	Rs.
10,000 shares of Rs. 10 each fully paid	1,00,000	Land and buildings	84,000
Profit and loss account	20,000	Plant and machinery	60,000
Debentures	15,000	Furniture and fittings	5,000
Trade creditors	20,000	5% (Tax free) Government bonds	20,000
Provision for taxation	9,000	Stock	2,000
Proposed dividend	15,000	Book debts	6,000
		Cash	2,000
Rs.	1,79,000	Rs.	1,79,000

The net profits of the company after charging depreciation and taxes were as follows :

1973	Rs. 17,000	1976	Rs. 20,000
1974	Rs. 19,000	1977	Rs. 19,000
1975	Rs. 18,000		

On 31st December, 1977 Land and buildings were revalued at Rs 95,000 ; Plant and machinery at Rs 71,000 ; and Furniture and fittings at Rs. 4,000. 10% represents a fair commercial rate of return on investment in the company.

Find out the value of goodwill basing it at five years' purchase of the average super-profits for the last five years. **(M. Com., Varanasi 1978)**

(*Goodwill Rs. 32,000*)

8. The balance sheet of Balak Khel Ramakda Manufacturing Co. Ltd. discloses the following financial position as on March 31, 1970 :

Liabilities	Rs.	*Assets*		Rs.
Paid-up capital :		Goodwill at cost		30,000
30,000 Equity shares of Rs. 10 each fully paid	3,00,000	Land and building : At cost less depreciation		1,75,000
Capital reserve	60,000	Plant and machinery : At cost less depreciation		90,000
Sundry creditors	71,000	Stock at cost		1,15,000
Provision for taxation	55,000	Book debts	98,000	
Profit and loss account	26,000	*Less* Provision for doubtful debts	3,000	95,000
		Cash at bank		7,000
Rs.	5,12,000	Rs.		5,12,000

You are asked to value the goodwill of the company for which purpose the following information is supplied : (*a*) The reasonable return on capital invested in the class of business done by the company is 12%. (*b*) Adequate provision has been made in accounts for income tax and depreciation. (*c*) The rate of tax may be taken at 50%. (*d*) The average rate of dividend declared by the company for the past five years was 15%.

[C A. (Inter) Nov. 1967 ; Accountancy (Hons.), Dibrugarh, 1971] 31·5

(Super profit Rs 18,880 ; Goodwill at two years' purchase of super profit Rs. 37,760)

9. The Gamma Co. (P) Ltd. is to be absorbed by the Delta Co. [illegible] it is neces- [illegible] the business [illegible] basis of the [illegible] f the average annual super profits, the net profits being averaged over five years and subject to whatever adjustments you, as the accountant making the valuation, consider necessary.

The profits of the Gamma Co. (P) Ltd. for the last five years (before charging income tax @ 55% on income) are as follows , 1965, Rs 50,000 ; 1966, Rs. 65,000 ; 1967, Rs. 45,000 ; 1968 Rs 55,000 ; and 1969, Rs. 75,000.

The directors of Gamma Co (P) Ltd. (three in number) will be appointed to the Board of Delta Co Ltd. on absorption and it is considered that their services have been (and will be in the future) worth Rs. 5,000 each per annum. There has never been made any charge against the profits of Gamma Co. (P) Ltd. for such services. The average capital invested in net tangible assets over the period is Rs. 1,80,000, And it is considered that the normal return to be expected from the particular type of business carried on by Gamma Co. (P) Ltd. is 10% Calculate the goodwill of Gamma Co. (P) Ltd. based on the above information

(Diploma in Cost and Works Accountancy, Rajasthan, 1971) 31 6

(Super profit Rs 1,350 , Goodwill Rs 4,050)

VALUATION OF SHARES

10. R. Diwakar holds 5,000 equity shares in Hindustan Ltd the paid-up capital of which is 30,000 shares (equity) of Re 1 each It is ascertained that : (*a*) the normal annual net profit of such company is Rs. 5,000 ; and (*b*) the normal return for the type of business carried out by the company is 8 "per cent". Shri Diwakar requires you to value his shareholdings based upon the above figures **(I C W A July, 1965) 31 7**

(Rs. 2 05)

11. If the fair value of a company's share is Rs 20, paid-up value is Rs. 10, expected rate of return is 10% (8% less than the actual rate of the earning) then what will be the intrinsic value of the share? [illegible] total number of shares of the company is 1,000 what will be the [illegible] of the net assets of the company ? Give all the calculations as [illegible] your answer. **(B. Com. [illegible])**

(Intrinsic value Rs. 22 ; Net [illegible])

Hint : Fair value is the simple average of intrinsic and [illegible] mation is given to calculate the yield value and therefore [illegible] ascertained

12. On December 31, 1965, the balance sheet of a limited company disclosed the following position :

Liabilities	Rs.	*Assets*	Rs.
Issued capital in Rs. 10 shares	4,00,000	Fixed assets	5,00,000
Reserves	90,000	Current assets	2,00,000
Profit and loss account	20,000	Goodwill	40,000
5 per cent debentures	1,00,000		
Current liabilities	1,30,000		
Rs.	7,40,000	Rs.	7,40,000

On December 31, 1965 the fixed assets were independently valued at Rs. 3,50,000 and the goodwill at Rs. 50,000. The net profits for the three years were : 1963, Rs. 51,600 ; 1964, Rs. 52,000 ; and 1965, Rs. 51,650 of which 20 per cent was placed to reserve, this proportion being considered reasonable in the industry in which the company is engaged and where a fair investment return may be taken at 10 per cent. Compute the value of the company's shares by (*a*) the asset method, and (*b*) the yield method.

(C.A. Inter., 1966 ; B. Com., Shivaji 1971) 31·8

(*Intrinsic value of shares Rs. 9·25 ; Yield value Rs. 10·35*)

13. The authorised and paid-up capital of a company consists of 1,000 5% preference shares of Rs. 100 each and 20,000 equity shares of Rs. 15 each, all fully called up and paid-up. A person holds 300 preference and 2,000 equity shares. Find out the value of equity shares held by the person assuming that the normal annual profit of the company is Rs. 40,000 and the normal return of similar equity shares is at the rate of 8% per annum. Assume company transfers 25% of the profit to general reserve and the profit given above is profit after tax.

(B. Com., North Bengal, 1972, Modified)

(*Rs. 15·63*)

14. The share capital of *XY* Ltd. consists of 10,000 Equity shares of Rs. 100 each, Rs. 50 paid-up and 2,500 8% cumulative preference shares of Rs. 100 each fully paid.

The balance sheet of *XY* Ltd. shows assets (exclusive of goodwill) at Rs. 15,00,000 ; Liabilities Rs. 4,00,000 : Reserves Rs. 3,50,000 and paid-up capital Rs. 7,50,000. The profits of *XY* Ltd. for the previous four years were Rs. 1,00,000, Rs. 2,00,000, Rs. 3,00,000 and Rs. 4,00,000.

The assets and liabilities are accepted at Balance Sheet figures and there are no arrears of dividends on preference shares which in similar business yield a return of 6% under current market conditions. The normal yield on capital employed in similar business is 10% and goodwill is valued at five times the purchase price of the super profit.

You are asked to value the Preference shares and the Equity shares in *XY* Ltd.

[B. Com. (Hons.) Calcutta University, 1979 Modifed]

[*Preference Share Rs. 133·33, Equity Share Rs. 105*]

[**Hint.** *Use Weighted Average method for calculating Goodwill*]

15. The following is the extract from the Balance Sheet of Excelsiors Limited.

		Rs.
Share Capital :	3,000 5% Preference shares of Rs. 10 each	30,000
	6,000 Equity shares of Rs. 10 each fully paid	60,000
	4,000 Equity shares of Rs. 7·50 each fully paid	30,000
Reserves		30,000
Profit and Loss A/c		12,000
6% Debentures		20,000
Sundry creditors		15,000

Find out the value of each type of equity share after taking into consideration the following information :

Average annual profit (before taxation) Rs. 50,000. Rate of income tax 50 paise in the rupee. Rs. 5,000 is transferred to General Reserve every year. Normal return 8% on capital employed. Goodwill to be valued at 4 years' purchase of super profit. Dividend declared by the companies doing similar business 9% market value of share being Rs. 102 (nominal Rs. 100). All assets are worth book value subject to the following changes :

(a) Investment in 5% Securities-	Rs.	(b) Land & Building-	Rs.
Cost price	12,000	Book value	30,000
Nominal value	10,000	Market value	35,000
Market value	14,400		

(B. Com. Madras Oct. 1979)

16. The following is the balance sheet of *X* Ltd., as at 31st December 1968 :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Land and buildings	41,250
7,500 shares of Rs. 10 each	75,000	Plant and machinery (at cost	
General reserve	15,000	less depreciation)	48,750
Taxation reserve	22,500	Trade marks	7,500
Workmen saving account	11,250	Stock	18,000
Profit and loss account	12,000	Debtors	33,000
Sundry creditors	36,750	Cash at bank	19,500
		Preliminary expenses	4,500
	Rs. 1,72,500		Rs 1,72,500

The plant and machinery is worth Rs. 45,000 and land and building have been valued at Rs. 90,000 by an independent valuer. Rs. 3,000 of the debtors are bad. The profits of the company have been as follows: 1966, Rs. 30,000, 1967, Rs. 33,750, and 1968, Rs 39,750. It is the company's practic [illegible]
find out the [illegible]
assets basis. [illegible]
of their shares.

Goodwill may be taken to be worth Rs. 60,000.

(B. Com. Madras, 1970 ; B. Com. Poona, 1970, '71 Modified)
(Intrinsic value Rs. 29·60 ; Yield value Rs. 36·75)

[Hints : 1. Preliminary expenses have not been deducted fr[illegible]he profits while bad debts have been deducted.
2. Since profits show increasing tendency, for th[illegible] valuation

17. The following was the balance sheet of Wines and Tobacco Limited on 31st Dec., 1969 and you are required to find out the fair value of its shares :

Liabilities		Rs.	Assets		Rs.
1,000 8% preference shares of Rs. 100 each, fully paid up		1,00,000	Building at cost		80,000
4,000 Equity shares of Rs. 100 each, fully paid up		4,00,000	Furniture at cost		3,000
Reserve fund		1,50,000	Stock at market value		4,50,000
Profit and loss account :			4% Government securities at cost (face value Rs. 4,00,000)		3,80,000
Balance 1st Jan., 1969	80,000		Book debts	3,00,000	
Profit for 1969	4,30,000		*Less* Provision	20,000	
		5,10,000			2,80,000
Provision against :			Cash		60,000
Buildings	10,000		Preliminary expenses		10,000
Investments	45,000				
		55,000			
Creditors		48,000			
	Rs.	12,63,000		Rs.	12,63,000

The following information is given : (*i*) The company's prospects for 1970 are equally good ; (*ii*) The buildings are now worth Rs. 3,50,000 ; (*iii*) Public companies doing similar business show a profit earning capacity of 15 per cent on market value of their shares ; (*iv*) Profits for the past three years have shown an increase of Rs. 50,000 annually.

(M. Com., Rajasthan, 1971)

(*Intrinsic value Rs. 335 ; Yield value Rs. 587*)

(Hints 1. While calculating intrinsic value provision for investments has been deducted from the total of assets to get net assets.

2. It has been assumed that company transfers 25% of profits to general reserve.

3. Since profits show continuous increase of Rs. 50,000 for the last three years and prospects in 1970 are equally good, the profit for determining the yield value has been taken as Rs. 4,80,000, *i.e.*, Rs. 4,30,000 + Rs. 50,000 expected increase.

18. Following is the Balance Sheet of *X* Ltd, as on 31st March, 1975 :

Liabilities	Rs.	Assets	Rs.
Issued capital :		Freehold property at cost	1,20,000
10,000. 6% preference shares of Rs. 10 each	1,00,000	Machinery at cost less Rs. 30,000 for depreciation	50,000
20,000 Equity shares of Rs. 10 each	2,00,000	Investments (6% debentures for Rs. 10,000)	10,000
Capital Reserve	40,000	Stock	2,25,000
General Reserve	1,20,000	Debtors	2,50,000
Profit and loss account	1,20,000	Cash at Bank	1,35,000
Creditors	1,50,000	Goodwill	40,000
Proposed Dividend	60,000		
Taxation Reserve	40,000		
Rs.	8,30,000	Rs.	8,30,000

The turnover, net profit and dividends paid in the past were as follows :

	Turnover	Net Profit	Dividend
	Rs.	Rs.	
Year ended 31-3-1971	16,00,000	1,25,000	10%
Year ended 31-3-1972	17,50,000	1,65,000	12½%
Year ended 31-3-1973	22,00,000	1,50,000	10%
Year ended 31-3-1974	25,00,000	2,00,000	15%
Year ended 31-3-1975	25,50,000	2,04,000	20%

You are required to calculate the value of a share in the company.

(M. Com, April 1975, Calcut)

	Ex-div.	Cum-div.
[*Intrinsic value*	26·50	29·20
Market value		
(1) *Based on capitalisation of profits*	30·00	32·70
(2) *Based on expected rate of dividend*	15·00	17·70]

Assumptions :

(1) Normal rate of return at 10%.

(2) Goodwill is taken at 3 years of super profits. The figure works out to Rs. 93,300 but rounded off to Rs. 90,000

(3) Rs. 18,400 is transferred to reserve for the calculation of market price based on capitalisation of profits.

(4) Expected rate of dividend is taken at 15%, being the average of the three preceding years.

(5) Corporate taxes taken at 50%.

19. It is provided in the articles of association that at the death of a shareholder his shares will be purchased by the remaining shareholders at a price to be settled on the basis of the last balance sheet. It is further provided that goodwill shall be valued on the basis of three years' purchase of the average annual profits for the last five years. The last balance sheet is as follows :

Liabilities	Rs.	Assets	Rs.
20,000 Equity shares of Rs. 10 each	2,00,000	Goodwill	2,00,000
General reserve	2,00,000	Investment at cost (market value Rs. 2,50,000)	3,00,000
Workmen's saving fund	2,00,000	Stock at cost	5,00,000
Employees' provident fund	1,00,000	Debtors	4,00,000
Creditors	6,00,000	Bank balance	70,000
Profit and loss account	1,70,000		
	Rs. 14,70,000		Rs. 14,70,000

The profits for the last five years were Rs. 15,000, Rs. 20,000, Rs. 25,000, Rs 30,000 and Rs. 35,000. You are required to calculate the price to be paid for each share.

(I.C.W.A. January, 1966; B. Com. Marathwada 1970, Modified) 31·9

(*Intrinsic value of share Rs. 1975*)

20. The following is the summarised balance sheet of M/s Victory Machines Ltd. as on September 30, 1965 :

Liabilities		Rs.	Assets	Rs.
Share capital :			Freehold property	1,20,000
30,000 Equity shares of Rs. 10 each		3,00,000	Plant	50,000
Reserve and surplus :			Stock	3,10,000
General	1,20,000		Debtors	2,03,000
Capital	40,000		Bank	1,17,000
Profit and loss	1,20,000		Cash	1,700
		2,80,000		
Current liabilities and provisions :				
Creditors	93,700			
I. T. payable	11,500			
Proposed dividend	34,500			
Provision for taxation	82,000			
		2,21,700		
		Rs. 8,01,700	Rs	8,01,700

Net profit (before taxation) for the last three years ended : 30th September, 1963, Rs. 1,38,000 : 30th September, 1964, 1,83,000 ; and 30th September, 1965, 1,97,000. Freehold property was valued early in 1965 at Rs. 1,60,000. Average yield in this type of business is 15 per cent on capital employed. You are required to find out the value of each equity share on the basis of above mentioned facts. (I.C.W.A. July, 1966) 31·10

[*Intrinsic value Rs. 20·67 : Yield value Rs. 30·40*]

[Hints : 1. Calculate average profit after assigning weights as 1, 2, and 3 for 1963, 1964 and 1965 respectively.

2. Transfer 20% of profits to reserve. Tax deducted is Rs. 11,500.]

21.

INDO-AMERICAN STEEL CO.
SUMMARISED BALANCE SHEET
as on 31st December, 1966

Liabilities	Rs. (Crores)	Assets	Rs. (Crores)
Share capital :		Block account (after providing all depreciation according to Income-Tax Act except initial depreciation)	2·0
Non-participating cumulative preference shares of Rs. 100 each (6½% free of income-tax)	0·5	Raw materials at cost, finished goods at cost, work in-progress at estimated cost	2·5
Equity shares of Rs. 10 each	2·0	Book debts	0·5
Reserves	1·0	Investments at cost	0·5
Profit and loss account before declaring dividend on equity shares	1·5	Cash in hand and at bank	1·0
5% Debentures	0·5		
Secured loan	1·0		
Sundry creditors	1·0		
	7·5		7·5

(*a*) Sale value of assets in block account, if customers available, is Rs. 5·0 crores, replacement value of assets in block account is 50% more than the original cost of the assets in the books. (*b*) Market value of investments is Rs. 1·75 crores. (*c*) Book debts are bad to the extent of about 50% of their book value. (*d*) Market value of raw materials, finished goods and work-in-progress is Rs. 3·0 crores. (*e*) The dividends on equity shares declared for the past five years are as follows :

1961, 13% ; 1962, 15% ; 1963 20% ; 1964 17½% ; 1965, 22½%.

In a similar company the market value of equity shares of the same denomination is Rs. 25 per share and in that company the average dividend declared for the previous five years is 20% without any major fluctuations from year to year and without any marked upward or downward tendency. It is also found that the intrinsic value of shares in that other company is lower than the alleged intrinsic value of shares of Indo-American Steel Co. Ltd.

You have been called upon to value the shares of Indo-American Co. Ltd. State the different methods by which such valuation can be done illustrating the same by calculations based on the figures and information supplied above. Which method of valuation would you recommend and why ? (C. A. Final) 31 11

[*Intrinsic value of share Rs. 40 00 ; Yield Value of share Rs. 20 (approx.)*]

[Hint Normal rate of return works out at 8% and expected return on weighted average basis is 19%. This expected rate is lowered to 16% on the basis that yield is fluctuating.]

22. *B* Ltd. build boats, all of the same class. The summarised accounts for the year 1968 are as follows :

TRADING AND PROFIT AND LOSS ACCOUNT
For the year ended December 31, 1968

		Rs
Sales (20 boats)		80,000
Cost of sales :		
Materials	48,000	
Labour	8,000	
		56,000
		24,000
Fixed overheads	11,600	
Office salaries	2,000	
Directors' remuneration	4,000	
		17,600
Net profit		6,400
Losses brought forward		4,900
Profit carried forward		Rs. 1,500

BALANCE SHEET
As on December 31, 1968

				Rs.
Share capital :				
100 shares of Rs. 10 each				1,000
Undistributed profits				1,500
				Rs. 2,500
Invested in :				
Fixed assets :				
Plant, etc.		2,500		
Vehicles		1,500		
				4,000
Current assets :				
Stock		11,000		
Debtors and bank		9,500		
			20,500	
Less Current liabilities :				
Creditors	17,000			
Directors' account	5,000			
			22,000	(1,500)
				Rs. 2,500

U Ltd. is offered all the issued shares at their net asset value on December 31, 1958 subject to the addition of goodwill valued at four times the projected earnings before taxation for 1969 and the lease valued at Rs. 1,500. For the purpose of computing the 1969 earnings, you are certain that : (1) based on firm's orders, 25 boats should be sold in 1969 at the 1968 price, (2) the percentage costs of production based on sales

should remain steady, apart from an anticipated increase in the labour rate to $12\frac{1}{2}\%$, (3) fixed overheads will increase by Rs. 1,700 and office salaries by 10%, and (4) a fair managerial remuneration for the directors is Rs. 3,000 per annum.

You are required to compute the price at which the shares are being offered to *U* Ltd. (Adapted from C. A. Final, England, 1969) 31·12

(Price per share Rs. 400)

23. Mr. and Mrs. Lamb held equity shares in Lamb Ltd. a company which had been engaged in a retail trade with one shop for many years.

Early in 1971 the Lambs decided to retire and employed an estate agent to sell the family business for them. The estate agent found a buyer, Mr. Fox, and the sale was agreed on the following terms :

Fixtures, fittings and equipment, shares in Group Buyers Ltd. benefit of lease and goodwill.	Rs. 8,000
Stock	At valuation

On informing his accountant of this, Mr. Lamb was advised that he should sell the shares in the company rather than the company sell its business and leave Mr. Lamb to liquidate it.

Mr. Fox agreed to buy the shares, the basis of the sale price to be as agreed previously. The valuation of the shares was to be made by the accountant after the accounts of the company for the year ended June 30, 1971 had been prepared. On June 30, 1971 the value of the stock was agreed at Rs. 5,250. On July 1, 1971 Fox took control of the business. The balance sheet of Lamb Ltd. on June 30, 1971 was :

Liabilities		Rs.	*Assets*		Rs.
Current liabilities			Fixed assets :		
Creditors	2,550		Fixtures, fittings and equipment, at cost	3,300	
Taxation	50		*Less* Depreciation to date	1,700	1,600
Directors' undrawn remuneration	1,800	4,400	Trade investments :		
Equity shares of Re. 1 each fully paid	1,000		Shares in Group Buyers Ltd	200	
Profit and loss account	150		Loan to Group Buyers Ltd.	500	700
	1,150		Current assets :		
Loan by a director	5,000	6,150	Stock	5,250	
			Debtors	1,600	
			Balance at bank	1,400	8,250
		Rs. 10,550			Rs. 10,550

You ascertain that since accounts were prepared a debt of Rs. 20 has proved to be bad. You are required to compute the value of each share being sold. (Adapted from C.A. Final, England, 1971) 31·13

(Value per share Rs. 7·33)

24. The summarised balance sheet of a private limited company as on December 31, 1967 is as follows :

Liabilities		Rs.	Assets		Rs.
sued capital :			Goodwill		17,500
0 0 7% Preference shares			Leasehold property	16,000	
of Re. 1 each		6,000	Less Depreciation	7,000	
,000 Equity shares of					9,000
Re. 1 each		10,000	Plant, etc.	9,500	
ebenture redemption fund		1,000	Less Depreciation	2,250	
ofit and loss account					7,250
alance on 1-1-1967	13,850		Investments, at cost :		
alance for year	8 175		Debenture redemption fund		1,000
		22,025	Stock at cost		5,250
% Debentures, redeemable			Debtors		4,050
as on December 31, 1971		2,000	Bank balance		1,950
urrent liabilities :					
reditors		4,975			
	Rs	46,000		Rs.	46,000

A holder of all the preference share capital and 6,000 of the equity ares has agreed to sell these shares, the former at par and the latter at a lue based on the above balance sheet, but subject to adjustments for the irpose of the valuation for the following :

(1) The leasehold property was acquired on January 1, 1958 and at e balance sheet date the lease has a further six years to run The cost ould be written off over the term of the lease by equal annual charges. o date Rs. 700 per annum has been written off. (2) Rs. 250 p.a. has een appropriated to the debenture redemption fund (3) In 1965, goods sting Rs 600 were purchased and have been included since that date at st in the stc·k li·t·. These goods were valueless on the balance sheet ate. (4) Ar
alance sheet
rovision for
counts. (6) Goodwill is to be valued at two years' purchase of the erage profits, after the above adjustments, of the three years 1965, 1966 id 1967, such profits being those available for dividend for ordinary areholders. The profits of the company as shown by the accounts for ose years, before appropriations and before providing for debenture terest and preference dividends, were Rs. 8,040, Rs. 9,290 and Rs. 8,965 spectively.

You are required to compute the total consideration due to the ending shareholders. **(C.A. Final, England, 1968)** 31·4

(Value of equity share Rs. 2 70 ; The amount paid to vending shareholders Rs. 22,200)

SUGGESTED READING

1. *Accounting for Goodwill*—Accounting Standards Committee London
2. *Advanced & Accounting*—Richard Lewis & Others
3. *Acconntancy*—William Pickles

8

Amalgamation, Absorption and External Reconstruction

Sec. 494 of the Companies Act, 1956, permits the liquidator of a company to accept shares, policies or other like interests in the transferee company for the distribution among the members of the transferor company. This means a company going into liquidation can be purchased by some other company, new or old, and the purchase price may be discharged fully or partly by issuing shares or debentures in the purchasing company. The phenomenon of purchase of a business of a corporate body by another corporate body is described as 'amalgamation', absorption', or 'external reconstruction'. These three terms should be very carefully used as their technical meanings are very much different from each other. The term Amalgamation is used when *two or more* existing companies go into liquidation and a *new* company is formed to take over this business. Absorption is used when *one or more* existing companies go into liquidation and some *existing* company (usually a big one) buys the business. External Reconstruction is used when *one* existing company goes into liquidation and a *new* company, formed for the purpose, buys its business. Thus salient features of the three terms may be summarised as follows in the form of a table :

TABLE SHOWING SALIENT FEATURES

Phenomenon	*How many companies must go into liquidation ?*	*Is formation of a new company necessary ?*
Amalgamation	Two or more (*i.e.*, minimum two companies must go into liquidation)	Yes. A new company must be formed.
Absorption	One or more (*i.e.* absorption can take place when any number of companies are liquidated)	No. Only existing company should buy the business.
External Reconstruction	One and only one	Yes. A new company must be formed. If it is taken over by an existing company, it will be called absorption.

In the case of internal reconstruction, which is discussed in the next chapter, there is no liquidation of the company and no taking over of the business by another company whether old or new. But in the case of amalgamation, absorption, or external reconstruction, the *liquidation* of the

company *must* take place, whether of one company or more companies and in all the above cases the *business must be purchased* by some other company whether that other company is a new one or an old one Thus in all the above three cases the accounting problems are common. They are :

(*a*) In all the cases accounting entries are to be passed in the books of company/companies going into liquidation to close the account books and

(*b*) In all the cases accounting entries are to be passed in the books of the purchasing company, new or old, to record transactions relating to the acquisition of business.

Since there is a common accounting procedure for all the three cases these have been grouped under this chapter and discussed at one place. From accounting complications point of view the problems relating to [illegible]

ing inter-company investments in ownership. This chapter has been divided into three major sections to discuss these types of problems separately.

A—SIMPLE PROBLEMS

Before proceeding to discuss the accounting entries a student must have a clear knowledge of the following :

(*a*) Ability to distinguish a liability and provision from an item which is in the nature of accumulated profit or loss.

(*b*) Different methods of calculating the purchase consideration.

(*c*) Different ways of treating the liquidation expenses.

Trade liabilities and liabilities. The term trade liabilities stands for those liabilities which are incurred on account of *goods* of the business. Trade creditors and bills payable are normally included in the term trade liabilities. Bank overdraft, debentures, salary outstanding, taxation liability, workmen savings, saving bank account, workmen profit sharing fund, pension fund, provident fund, etc., are all liabilities but not trade liabilities. It may, however, be appreciated, the term liabilities is a broader term and it *includes trade liabilities also.*

"All Assets" and "Business". The terms "all assets" includes cash also and term "business" stands for assets less all liabilities

Accumulated profits (*A*) In the preparation of real s[illegible]tion account only items in the nature of liabilities and provisions will be transferred. As will be seen subsequently items in the nature of accumulated profits or losses will be transferred to shareholders' account. So a precise knowledge of these terms makes it convenient to solve the problems correctly.

Insurance fund. Every company insures for certain risks for which it has to pay premium. But some companies instead of paying such

* These problems are normally asked in post-gra[illegible]te and professional exami-nations. However, simple problems on these top[ics] [illegible] for under-graduate students preparing for honours course in co[illegible]

premium to an external agency, credit such amount to an insurance fund from out of which any risks are met. Insurance, thus, becomes an internal arrangement. At the time of liquidation, any balance in the fund represents accumulated profits, as no more risks are to be met from out of such fund.

General reserve, dividend equalisation reserve. They are the examples of accumulated profits. They are created out of profits earned by the business. General reserve is created for strengthening the general financial position of the company. Dividend equalisation reserve is created for maintaining the rate of dividend during bad years. When in a particular year profits of the company are less then directors use this resource for declaring dividend. When profits are higher, they make a transfer from profits to this reserve.

Accident fund and Workmen Compensation fund. These are also the examples of internal insurance. These are created to meet any liability on these accounts at some future time. When the liquidation of the company takes place, there is no further possibility of any liability arising on these accounts and hence they represent accumulated profits. However, at the time of liquidation, if there is some liability on these accounts, they must first be met out of these funds and only the balance, if any, left should be treated as profit. The journal entry for recording the fresh liability arising on any of these accounts will be :

1. *Entry for recording the liability* :
   Debit Workmen compensation fund or accident fund account
   Credit Outstanding liability account
2. *Entry of discharging the liability* :
   Debit Outstanding liability account
   Credit Cash/Bank account

Accumulated losses. Quite often a student is not able to treat properly the accumulated losses or accounts representing accumulated losses. When a balance sheet shows accumulated losses like (*i*) Debit balance of profit and loss account, (*ii*) Preliminary expenses, (*iii*) Discount on shares and debentures ; (*iv*) Commission on issue of shares or debentures then these losses are transferred to equity shareholders account (not to realisation account). The journal entry is :

Debit Equity shareholders' account
Credit Accumulated losses account

Provisions. The balance sheets often show provisions like (*i*) Provision for dobtful debts ; (*ii*) Provision for depreciation ; (*iii*) Provision for investments (for meeting out the loss on account of fluctuation in the price of investments). These provisions are sometimes shown on the assets side by way of deduction from the particular assets and sometimes on the liability side. Whatever may be the mode of presentation, these provisions are transferred to realisation account only when that particular asset is transferred to realisation account. For instance, if a company takes over building but does not take over debtors, then building and the provision for depreciation on building will be transferred to realisation account and debtors its provision both will not be transferred to realisation account.

A summary of the various examples of the trade liabilities, accumulated profits and accumulated losses is given in the following table :

TABLE SHOWING CLASSIFICATION OF ACCOUNTS

Trade Liabilities	Liabilities	Provisions and Accumulated losses	Accumulated Profits
1. Trade Creditors or simply creditors	1. Trade Creditors	1. Provision for Depreciation	1. Profit and loss account (Cr.)
2. Bills Payable	2. Bills payable	2. Provision for doubtful debts	2 General reserve fund
	3. Bank overdraft	3. Provision for investments	3. General reserve account
	4. Debentures	4 Preliminary expenses	4. Debenture sinking fund
	5 Loans	5. Discount on shares and debentures	5. Capital reserve
	6 Workmen saving bank account	6 Profit and loss account (Dr.)	6. Capital redemption reserve account
	7. Workmen profit sharing fund		7. Shares forfeited account
	8. Provident fund		8. Share premium account
	9 Pension fund		9. Workmen compensation fund
	10. Superannuation fund		10. Workmen accident fund
	11. Taxation provision		11. Insurance fund
	12. Unclaimed dividend		12 Divided Equalisation fund
	13. Outstanding expenses		13. Development rebate reserve

(B) Purchase consideration

Calculation of purchase consideration is perhaps the most important [illegible]

When shares should be taken at market value, and (3) Treatment of fraction share

I—Methods of calculation

Purchase consideration is [illegible] amount [illegible] vendor [illegible] *indirectly* by stating the values of various assets and liabilities taken over (discussed under net asset method) [illegible] payments as [illegible] asset and net [illegible] cussed and the third method, being the combination of the [illegible] methods, has been explained by giving illustrations.

Net payment method. (*i*) *Add all payments whatever may* [illegible] In all the questions where net payment method of purchase [illegible] adopted the student has simply to *add* the payments [illegible] purchasing company. The payment of purcha[illegible]

absence of any agreement, is always satisfied in *cash*. The calculation of equivalent amount of cash is *based on the market value of the shares.*

Illustration 128. A purchasing company has agreed to issue one share of Rs. 10 each Rs. 8 called up for every there shares in the vendor company. Find the amount of purchase consideration if there are 50,000 shares in the vendor company. The shares of the purchasing company are quoted at Rs. 18 in the market.

Solution

For 3 shares purchasing company gives	1 share
For 50,000 shares „ „ „	$1/3 \times 50{,}000$ shares
	$= 16{,}666\frac{2}{3}$ shares

Since it has not been agreed that the purchasing company is to issue shares at market value the whole number of shares will be issued at paid-up value and fraction will be satisfied in cash calculated on the basis of market value. Therefore, purchase consideration is :

$16{,}666 \times$ Rs. 8	1,33,328 in shares
$\frac{2}{3} \times$ Rs. 18	12 in cash
Total Purchase consideration	1,33,340

C. Liquidation Expenses

When a company goes into liquidation, some expenses have to be incurred. These are called liquidation expenses. They can be borne by the purchasing company or by the vendor company. Its accounting treatment is different in different cases. This is as follows :

When liquidation expenses are borne by the vendor company

When liquidation expenses are borne by the vendor company they are dealt through realisation account. The entry is :

Debit Realisation account

Credit Bank account

[Realisation account is a nominal account in nature and hence debited for all expenses.]

When liquidation expenses are borne by the purchasing company

When purchasing company agrees to bear liquidation expenses, it can treat it in two ways. The first alternative is to pay liquidation axpenses directly. In this case the journal entry is :

Debit Goodwill account

Credit Bank account

Since liquidation expenses are incurred at the time of purchase of a business, they are capitalised and debited to goodwill account.

The second alternative is to pay the agreed amount to the vendor company who, in turn, will pay the expenses. In this case the following journal entries are made in the books of the purchasing company.

Debit Goodwill account

Credit Vendor company

(For the amount due on account of liquidation expenes)

Debit Vendor company

Credit Bank account

(For the payment of liquidation expenses)

Alternatively in both the cases, this amount can be added to purchase consideration in which case no separate entry need be made in the books of the purchasing company. (Student will realise afterwards that the amount is automatically debited to goodwill account.)

The vendor company in this case can adopt any of the following three courses.

(1) As the expenses are met by the purchasing company, this item can be ignored altogether.

(2) Include the amount in the purchase consideration and also make the following entry.

Debit Realisation account

Credit Bank account

Under this, the amount figures on both sides of the realisation account and thus does not affect the profit or loss on realisation.

(3) Treat the item as reimbursable and make the following entries :

Debit Purchasing company

Credit Bank account

(Being the liquidation expenses paid and due from the purchasing company)

Debit Bank account

Credit Purchasing company

(Being the reimbursement of liquidation expenses by the purchasing company.

D—ACCOUNTING TREATMENT

[illegible] treatment [illegible] divided into two parts : (*i*) books of [illegible] procedure [illegible]

Books of purchasing company

First method. Under this method minimum two journal entries are made : (*i*) for puchasing assets and liabilities ; and (*ii*) for making the payment. The journal entries are :

(1) *For recording the assets and liabilities taken over* :

Debit Individual assets *taken over* at revised values, if any

Credit Individual liabilities *taken over* at revised values, if any

Credit Liquidator of the vendor company (with purchase consideration)

Any difference between total debits and total credits (which is often seen) is either debited to goodwill account or credited to capital reserve [illegible] exceeds debit side the difference is put to [illegible]

(2) *For making the payment of purchase consideration :*

Debit Liquidator of vendor company

Credit Cash account
Credit Share capital account
Credit Premium on the share account
Credit Debenture etc.

Second method. *Under this method minimum three journal entries* are made. A new account "business purchase account" is opened and purchase of business is recorded through this account. The journal entries are :

(1) *For the purchase of business :*

Debit Business purchase account (with purchase consideration)

Credit Liquidator of the vendor company

(2) *For recording the purchase of individual assets and liabilities :*

Debit Assets taken over (at revised values, if any)

Credit Liabilities taken over (at revised values, if any)

Credit Business purchases account (with purchase consideration)

The total amount on the debit side of this journal entry quite often is not equal to that on the credit side. *In this case, the difference is calculated and is shown on the side the amount is short. If it is shown on the debit side, it is debited to goodwill account, if it is shown on the credit side, it is credited to capital reserve account.* It may be noted that business purchase account is cancelled by this journal entry.

(3) *For making the payment :* The same journal entry is done as is shown under the first method. The student is advised to follow the second method as suggested in Chapter 4 on 'acquisition of business'.

Books of vendor company

(1) *For transferring assets taken over by the purchasing company*

Debit Realisation account

Credit Individual assets (at book values)

It may be noted that—

(a) Accumulated expenses (like preliminary expenses, discount) and accumulated loss (like debit balance of profit and loss account) are not included in the definition of assets and are not transferred to realisation account. They are directly transferred to equity shareholders' account.

(b) If cash is not taken over by the purchasing company, then it should not be transferred to realisation account.

(c) Goodwill account and other intangible assets like trade marks, patent rights (which do not have any value otherwise if they are not purchased by the purchasing company) are always transferred to realisation account.

(2) *For transferring liabilities taken over by the purchasing company :*

Debit Liabilities (at book value)

Credit Realisation account

It may be noted that—

(a) Accumulated profits are not to be included in the definition of liabilities (see page 4·399)

(b) All those liabilities which the purchasing company agrees to pay out are not transferred to realisation account.

(c) All those liabilities which are not taken over by the purchasing company are not transferred to realisation account.

For example, the vendor company has three types of liabilities: (i) creditors; (ii) bills payable; and (iii) debentures. If the purchasing [illegible] the [illegible] hese [illegible].

Debenture is not a trade liability and, therefore, it is unusual for the purchasing company to take over that item. This liability is settled either in cash or by the allotment of debentures in the purchasing company. Therefore, the vendor company transfers the amount to 'debentureholders' account' and closes it after the payment is made.

(3) *For purchase consideration :*
  Debit Purchasing company
    Credit Realisation account

(4) *For liquidation expenses :*
  Debit Realisation account
    Credit Bank account

If the liquidation expenses are borne by the purchasing company, the different ways of treating the item have already been discussed.

(5) *For loss or gain on assets/liabilities not taken over :*

[illegible] open [illegible] are to [illegible] gain on these transactions. This loss or gain is transferred to realisation account. The following journal entries are possible :

(i) *For loss on payment of liability or sale of assets :*
  Debit Realisation account
    Credit Assets/liability account

(ii) *For gain on payment of liability or sale of assets :*
  Debit Asset/liability account
    Credit Realisation account

Alternativively these items can also be dealt through realisation account.

(6) *Premium or discount to debentureholders and preference shareholders.*

As per the scheme of absorption or amalgamation, debentureholders and preference shareholders may have to receive premium or suffer dis-

count. Such premium or discount must first be adjusted before transferring the balance in the realisation account to equity shareholders.

Debit Realisation account
Credit Debentureholder's account/preference shareholders account } for premium

Reverse entry in case of discount.

(7) *For closing realisation account* : This is transferred to equity shareholders' account.

Debit Realisation account
Credit Equity shareholders' account] (for gain)

Reverse entry is done if there is loss on realisation account.

(8) *For receiving purchase consideration* :
Debit Cash/shares in purchasing company/debentures in purchasing company
Credit Purchasing company

(9) *For transferring share capital* :
(*i*) *Debit* Equity share capital
Credit ·Equity shareholders' account
(*ii*) *Debit* Preference share capital
Credit Preference shareholders' account

(10) *For transferring accumulated profits* :
Debit Accumulated profits
Credit Equity shareholders' account

(11) *For transferring accumulated losses* :
Debit Equity shareholders' account
Credit Accumulated losses

(12) *For transferring debentures* :
Debit Debentures account
Credit Debentureholders' account

(13) *For paying liabilities not taken over* :
Debit Liabilities not taken over
Credit Bank/debentures/or other form of payment } (actual payment)

(14) *For selling assets not taken over* :
Debit Cash/bank
Credit Assets sold away] (with the actual amount realised)

(15) *For paying shareholders* :
(*i*) *Debit* Preference shareholders' account
Credit Cash/shares in purchasing company
(*ii*) *Debit* Equity shareholders' account
Credit Bank/shares in purchasing company

(16) *For paying debentureholders* :
Debit Debentureholders account
Credit Bank/debentures in purchasing company

CASE 1—ILLUSTRATION BASED ON NET PAYMENT METHOD

Illustration 129. (Absorption)

X Co. Ltd agreed to acquire the assets excluding cash as on 31st December, 1971 of *Y* Co. Ltd. The balance sheet of *Y* Ltd as on that date was :

Liabilities	Rs.	*Assets*	Rs.
Equity capital		Goodwill	60,000
(Shares of Rs. 10 each)	3,00,000	Land and buildings	1,20,000
General reserve	80,000	Plant and machinery	2,00,000
Debentures	50,000	Stock	80,000
Creditors	10,000	Debtors	30,000
Profit and loss account	60,000	Cash	10,000
Rs.	5,00,000	Rs.	5,00,000

The consideration was as follows :

(*a*) A cash payment of Rs. 4 for every share of *Y* Ltd.

(*b*) The issue of one share of Rs 10 each (Market value Rs. 12·50) in the *X* Co Ltd for every share in *Y* Co. Ltd.

(*c*) The issue of 1,100 debentures of Rs. 50 each in *X* Co. Ltd to enable *Y* Ltd to discharge its debentures at a premium of 10%.

(*d*) The expenses of liquidation of *Y* Ltd amounting to Rs. 4,000 was to be met by themselves.

Give the journal entries in the books of both the companies and important ledger accounts in the books of *Y* Ltd.

[B. Com. (Special) Madras, September, 1975]

Solution

Calculation of purchase consideration :

				Rs.
Cash	—	30,000 × Rs. 4	—	1,20,000
Shares	—	30,000 × Rs. 10	—	3,00,000
Debentures	—	1,100 × Rs. 50	—	55,000
Purchase consideration				4,75,000

JOURNAL OF *Y* LTD

		Rs	Rs
Realisation account	Dr.	4,90,000	
To Goodwill			60,000
To Land and buildings			1,20,000
To Plant and machinery			2,00,000
To Stock			80,000
To Debtors			30,000
Creditors account	Dr.	10,000	
To Realisation account			10,000
Realisation account	Dr.	5,000	
Debentureholders' account			5,000
Realisation account	Dr.	14,000	
To Cash account			14,000
(Creditors—10,000			
Expenses—4,000)			

X Ltd account	Dr.	4,75,000	
To Realisation account			4,75,000
Shareholders' account	Dr.	24,000	
To Realisation account			24,000
Cash account	Dr.	1,20,000	
Shares in *X* Ltd account	Dr.	3,00,000	
Debentures in *X* Ltd account	Dr.	55,000	
To *X* Ltd account			4,75,000
Share capital account	Dr.	3,00,000	
General reserve account	Dr.	80,000	
Profit and loss account	Dr.	60,000	
To Shareholders' account			4,40,000
Shareholders account	Dr.	4,16,000	
To Cash account			1,16,000
To Shares in *X* Ltd account			3,00,000
Debentures account	Dr.	50,000	
To Debentureholders' account			50,000
Debentureholders' account	Dr.	55,000	
To Debentures in *X* Ltd account			55,000

Ledger of Y Ltd

REALISATION ACCOUNT

		Rs.		Rs.
To Goodwill		60,000	By Creditors	10,000
To Land and building		1,20,000	By *X* Ltd A/c	4,75,000
To Plant and machinery		2,00,000	By Shareholders' A/c	24,000
To Stocks		80,000		
To Debtors		30,000		
To Debentureholders' A/c		5,000		
To Cash— Creditors	10,000			
Expenses	4,000			
		14,000		
	Rs.	5,09,000	Rs.	5,09,000

SHAREHOLDERS' ACCOUNT

	Rs.		Rs.
To Realisation A/c	24,000	By Share capital	3,00,000
To Cash	1,16,000	By General reserve	80,000
To Shares in *X* Ltd	3,00,000	By Profit and loss A/c	60,000
Rs.	4,40,000	Rs.	4,40,000

DEBENTUREHOLDERS' ACCOUNT

	Rs.		Rs.
To Debentures in *X* Ltd	55,000	By Debentures A/c	50,000
		By Realisation A/c	5,000
Rs.	55,000	Rs.	55,000

X LTD ACCOUNT

	Rs.		Rs.
To Realisation A/c	4,75,000	By Cash	1,20,000
		By Shares in *X* Ltd	3,00,000
		By Debentures in *X* Ltd	55,000
	Rs. 4,75,000		Rs. 4,75,000

CASH ACCOUNT

	Rs.		Rs.
To Balance b/d	10,000	By Realisation A/c	14,000
To *X* Ltd A/c	1,20,000	By Shareholders A/c	1,16,000
	Rs. 1,30,000		Rs. 1,30,000

JOURNAL OF *X* LTD

		Rs	Rs.
Business purchase account	Dr	4,75,000	
To Liquidator of *Y* Ltd			4,75,000
Goodwill account	Dr	45 000	
Land and buildings account	Dr.	1,20,000	
Plant and machinery account	Dr	2,00,000	
Stock account	Dr	80,000	
Debtors account	Dr	30,000	
To Business purchase account			4.75.000
Liquidator of *Y* Ltd	Dr	4,75,000	
To Cash			1,20,000
To Equity share capital			3,00,000
To Debentures			55,000

Illustration 130. (Absorption)

Azad Co. Ltd went into liquidation on 3 st December, 1965, and its whole undertaking was sold to Balu Co Ltd, the terms agreed to by the [illegible] the discharge of the debentures outstanding by the issue [illegible] in Balu Co Ltd., for each Rs. 100 of [illegible] iption by the transferee of all other liabilities of the transferor ; and (*c*) the exchange of five Re. 1 fully paid shares in Balu Co. Ltd. at an agreed value of Rs. 1·25 a share. for every eight shares in Azad Co. Ltd.

THE BALANCE SHEET OF AZAD CO. LTD.
as on 31st December, 1965

Liabilities	Rs.	Assets	Rs.
Share Capital—		Freehold properties	[illegible]
8,00,000 shares of Re. 1 each fully paid	8,00,000	Plant and machinery	[illegible]
9% Debentures	1,00,000	Investment on accident compensation fund	[illegible]
Creditors	15,000	Stock and debtors	[illegible]
Employees' profit-sharing fund	25,000	Balance at bank	[illegible]
Fatal accident compensation fund	5,000		
Profit and loss account	20,000		
	Rs. 9,65,000		

Balu Co. Ltd. also undertook to pay the liquidator of Azad Co. Ltd. a sum of money, on the basis of Re. 1 per share, to enable him to deal with fractions of shares ; the number of shares represented by the addition of the fractions was 940.

Five days after the day of transfer one of the discounted bills, for Rs. 1,000, fell due and was dishonoured. Show Journal entries to close the books of Azad Co. Ltd. Ignore the cost of liquidation.

(C. A. Final, 1966)

Solution :

JOURNAL ENTRIES IN THE BOOKS OF AZAD CO. LTD.

		Rs.	Rs.
Realisation account	Dr.	9,65,000	
To Freehold properties account			6,00,000
To Plant and machinery account			2,00,000
To Investment on accident compensation fund account			5,000
To Stock and debtors account			1,50,000
To Bank account			10,000
(Being the assets taken over by Balu Co. Ltd. as per agreement dated......now transferred to realisation account)			
Creditors account	Dr.	15,000	
Employees' profit sharing fund account	Dr.	25,000	
To Realisation account			40,000
(Being the liabilities taken over by Balu Co Ltd as per agreement dated......, transferred to realisation account)			
Balu Co Ltd account	Dr.	7,19,765	
To Realisation account			7,19,765
(Being the purchase consideration as agreed upon)			
9% Debentures in Balu Co Ltd account	Dr.	95,000	
Shares in Balu Co Ltd account	Dr.	6,23,825	
Bank account	Dr.	940	
To Balu Co Ltd account			7,19,765
(Being the purchase consideration received from Balu Co Ltd)			
9% Debenture account	Dr.	1,00,000	
To Debentureholders account			1,00,000
(Being the transfer of debentures to debentureholders)			
Debentureholders account	Dr.	5,000	
To Realisation account			5,000
(Being the discount to be suffered by debentureholders)			
Debentureholders account	Dr.	95,000	
To 9% Debentures in Balu Co Ltd account			95,000
(Being the transfer of debentures received from Balu Co Ltd transferred to debentureholders)			
Share capital account	Dr.	8,00,000	
Fatal accident compensation fund account	Dr.	5,000	
Profit and loss account	Dr.	20,000	
To Shareholders account			8,25,000
(Being the transfer of share capital account, fatal accident compensation fund account and profit and loss account to the account of shareholders)			

		Dr (Rs.)	Cr (Rs.)
Shareholders' account	Dr	2,00,235	
To Realisation account			2,00,235
(Being loss on realisation transferred to shareholders' account)			
Shareholders' account		6,24,765	
To Shares in Balu Co Ltd			6,23,825
To Bank account			940
(Being the shares in Balu Co Ltd distributed to shareholders)			

TUTORIAL NOTES

Calculation of purchase Consideration.

	Rs.
9% Debentures stock in Balu Co. Ltd. at Rs. 95 for Rs. 100	95,000
4,99,060 shares, *i.e.*, 5,00,000 less 940 shares for fractions, in Balu Co. Ltd. at an agreed value of Rs. 1·25 per share of Re. 1 each	6,23,825
Cash to deal with fractions of shares	940
	Rs. 7,19,765

Illustration 131. (External Reconstruction)

On 1st July, 1970 the balance sheet of Amrit Limited was as under :

Liabilities	Rs	*Assets*	Rs.
Authorised and issued capital :		Goodwill	1,00,000
3,000 6% Cumulative preference shares of Rs. 25 each *fully paid*	75,000	Sundry assets	2,50,000
8,000 Equity shares of Rs 50 each, fully paid	4,00,000	Cash	10,000
6% Debentures	50,000	*Profit and loss account*	1,90,000
Creditors	25,000		
	Rs. 5,50,000		Rs 5,50,000

Preference dividends were in arrears for two years A scheme of reconstruction agreed upon was as under (1) A new company to be formed, called Amrit (1970) Limited with an authorised capital of Rs 5,00,000 all in equity shares of Rs 100 each (2) One equity share of Rs. 100 each fully paid in the new company to be issued in exchange of 3 preference shares in the old company. (3) One equity share of Rs. 100 each fully paid in the new company to be exchanged for 4 equity shares in the old company. (4) Arrears of preference dividend to be cancelled. (5) Debentureholders to receive 50 equity shares in the new [illegible] fully paid. (6) Creditors to be taken over by the new company [illegible] diately paid off (7) The new company to issue remaining [illegible] for public subscription. (8) The new company to take over [illegible] assets, subject to revaluation of "sundry assets" at Rs. 2,6[illegible]

Prepare the necessary ledger accounts in the books [illegible] and open the books of the new company by means [illegible] assuming that the public subscription was fully [illegible]

[...]n :

Purchase consideration is calculated as under :

		Rs.
1.	1,000 equity shares of Rs. 100 each fully paid to be issued to the preference shareholders	1,00,000
2.	2,000 equity shares of Rs. 100 each to be issued as fully paid to the equity shareholders	2,00,000
3.	500 equity shares of Rs. 100 each to be issued as fully paid to the debentureholders	50,000
	Total purchase consideration	Rs. 3,50,000

Ledger of M/s Amrit Limited

REALISATION ACCOUNT

	Rs.		Rs.
To Goodwill	1,00,000	By Creditors	25,000
To Sundry assets	2,50,000	By M/s Amrit (1970) Ltd	3,50,000
To Cash	10,000		
To Equity shareholders' account	15,000		
	Rs. 3,75,000		Rs. 3,75,000

EQUITY SHAREHOLDERS' ACCOUNT

	Rs		Rs.
To Profit and loss account	1,90,000	By Equity share capital account	4,00,000
To Pref. shareholders' account (Loss from the shareholders' account) (1)	25,000	By Realisation account	15,000
To Shares in M/s Amrit (1970) Limited	2,00,000		
	Rs. 4,15,000		Rs. 4,15,[...]

PREFERENCE SHAREHOLDERS' ACCOUNT

	Rs.		
To Shares in M/s Amrit (1970) Limited	1,00,000	By Preference share capital account	7[...]
		By Equity shareholders' account	2[...]
	Rs. 1,00,000		Rs. 1[...]

JOURNAL OF M/S AMRIT (1970) LTD.

		Rs.	
Goodwill account	Dr.	1,00,000	
Sundry assets account	Dr.	2,65,000	
Cash account	Dr.	10,000	
To Creditors account			
To Liquidators of M/s Amrit Ltd			
(Being the business of M/s Amrit Ltd taken over)			
Liquidators of M/s Amrit Limited	Dr.	3,50,000	
To Equity share capital account			
(Being purchase consideration discharged by the issue of 3,500 equity shares of Rs. 100 each as fully paid)			

Cash account To Equity share capital account (Being issue of the remaining 1,500 equity shares)	Dr.	1,50,000	 1,50,000
Creditors account To Cash account (Being cash paid to creditors)	Dr.	25,000	 25,000

TUTORIAL NOTES

(1) Loss on payment to preference shareholders tranferred to equity shareholders account. Alternatively, the amount can be debited to realisation account in which case equity shareholders will have Rs. 10,000 as loss on realisation.

Illustration 132. (External Reconstruction)

The balance sheet of *D* limited is as follows:

BALANCE SHEET
as on December 31, 1970

		Rs.		Rs.
2,500 6½% preference shares of Rs. 20 each fully paid		50,000	Patents	24,000
3,000 equity shares of Rs. 20 each fully paid		60,000	Buildings	60,000
5% Debentures	10,000		Cash	500
Add: Interest	2,000		Debtors	12,000
		12,000	Stock	18,000
Creditors		8,000	Profit and loss account	15,000
	Rs.	1,30,000		Rs. 1,30,000

The following scheme was passed and sanctioned: (*i*) *X* Ltd to be formed to take over the business; (*ii*) One share of Rs. 10 fully paid in the new company to be issued for every three equity shares in the old company; (*iii*) Three shares of Rs. 10 fully paid in the new company to be issued for every five preference shares in the old company; (*iv*) Debentureholders to be paid in full by *X* Ltd: (*v*) *The creditors to receive* [illegible] 10 in the [illegible] s account [illegible] cleared by issuing one Rs 10 fully paid preference share in *X* Ltd for every twenty held; and (*viii*) Any balance available by the scheme to be used in writing down buildings.

Give opening journal entries and prepare the initial balance sheet of *X* Ltd. *(Institute of Company Secretaries, Final, 1971)*

Solution.

Calculation of purchase consideration:

	Number Rs.	*Amount* Rs.
Shares to be issued:		
[illegible]	1,000	10,000
[illegible]	1,500	15,000
[illegible]	125	1,250
[illegible]	640	6,400

			Rs.	Rs.
1	Business purchase account	Dr.	32,650	
	To Liquidators of *D* Ltd			32,650
	(Purchase consideration for the business of *D* Ltd as per the agreement)			
	Buildings account	Dr.	14,150	
	Sundry debtors account	Dr.	17,000	
	Stock account	Dr.	18,000	
	Cash account	Dr.	500	
	To 5% debentures account			10,000
	To Interest payable account			2,000
	To Business purchase account			32,650
	(Various assets and liabilities taken over from *D* Ltd as per the agreement. Value of buildings is the balancing figure since it is to be adjusted)			
	Liquidator of *D* Ltd	Dr.	32,650	
	To Share capital account			32,650
	(The amount of the shares issued in satisfaction of purchase consideration)			

BALANCE SHEET OF *X* LTD

as on December, 1970

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Fixed assets :	
Authorised	?	Building at cost	14,150
Issued and subscribed		Current assets :	
3,265 shares of Rs. 10 each fully paid	32,650	Stock at cost	18,000
(Issued for consideration other than cash)		Sundry debtors	12,00
5% Debentures	10,000	Cash	50
Sundry debentureholders for interest	2,000		
Rs.	44,650	Rs.	44,

Illustration 133. (Absorption)

The following is the balance sheet of Camy Ltd as on 31st March,

Liabilities	Rs.	*Assets*		
Share capital :		Goodwill		
Equity shares of Rs. 10 each, Rs. 8 paid up	2,00,000	Land and buildings		
6% preference shares of Rs. 10 each fully paid	1,00,000	Plant		
General reserve	40,000	Stock		
Insurance fund	10,000	Sundry debtors	90,000	
Workmen compensation fund	8,000	*Less* : Provision for doubtful debts	4,000	
Provident fund	6,000			
Creditors	24,000	Cash at bank		
Bills payable	12,000	Preliminary expenses		
Workmen profit-sharing fund	28,000			
Profit and loss account	80,000			
Rs.	5,08,000			

Sony Ltd decided to absorb the business of Camy Ltd at book values except land and building and plant which were valued at Rs. 1,20 000 and Rs. 1,00,000 respectively, the consideration being the assumption of trade liabilities, the payment of liquidation expenses Rs. 300; the payment of workmen profit sharing fund at 10% premium, the issue of one equity share of Rs. 20 each for every two preference shares in Camy Ltd the issue of one equity share of Rs. 20 for every three equity shares in Camy Ltd and the payment of Rs. 4 per equity share in cash. The equity shares of Sony Ltd are quoted in the market at Rs. 45.

You are required to : *(a)* calculate purchase consideration : *(b)* make journal entries in the books of vendor company ; and *(c)* make journal entries in the books of purchasing company.

Solution.

Calculation of purchase consideration :

Since all the forms of payments have been specifically given, the net payment method of calculating purchase consideration is adopted. We will add all the payments either in cash or shares or in any other form and shall not take any cognisance of the purpose for which the payment is made.

Details		*Amount*	*Form*
		Rs.	
Liquidation expenses		300	Cash
Workmen profit sharing fund	28,000		
Add 10% premium	2,800		
	——	30,800	Cash
Shares for preference shareholders			
$\frac{1}{2} \times 10,000 \times$ Rs. 20		1,00,000	Equity shares
Shares for equity shareholders			
$\frac{1}{3} \times 25,000 = 8,333\frac{1}{3}$ shares, *i.e.*, 8,333 shares of Rs. 20 each ; and		1,66,660	Equity shares
$\frac{1}{3}$rd share is satisfied in cash on market value, *i.e.* $\frac{1}{3} \times 45$		15	Cash
Payment in cash, $25,000 \times 4$		1,00,000	Cash
Total purchase consideration		3,97,775	

JOURNAL OF SONY LTD

		Rs.	Rs.
Land and building account	Dr.	1,20,000	
Plant account	Dr.	1,00,000	
Stock account	Dr	70,000	
Sundry debtors account	Dr	90,000	
Cash at bank account	Dr	64,000	
To Provision for doubtful debts account			4 000
To Creditors account			24 000
To Bills payable account			12,000
To Liquidator of Camy Ltd account (purchase consideration)			3,97,775
To Capital reserve (balancing figure)			6,225
(Being assets and liabilities taken over by Sony Ltd)			
Liquidator of Camy Ltd	Dr	3,97,775	
To Bank			1,31,115
To Equity share capital			2,66,660

Tutorial Notes: 1. Land and building and plant have been shown at revised values. 2. Only trade liabilities are taken over by Sony Ltd. 3. Capital reserve is the difference between total debts and total credits. 4. Goodwill of Camy Ltd has not been debited in the books of Sony Ltd. If it were recorded the balancing figure for capital reserve would have been increased. There is no use of showing capital reserve and goodwill accounts simultaneously. 5. Debtors are always shown at full amount before deducting any provision for doubtful debts. Its provision appears separately on the credit side. 6. Since liquidation expenses are added in the purchase consideration, no separate entry for it has been made.

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			Rs.
Realisation	Dr	5,04,000	
To Goodwill account			80,000
To Land and building account			70,000
To Plant account			1,30,000
To Stock account			70,000
To Sundry debtors account			90,000
To Cash at bank account			64,000
(Transfer of assets taken over)			
Creditors account	Dr.	24,000	
Bills payable account	Dr.	12,000	
Provision for doubtful debts account	Dr.	4,000	
To Realisation account			40,000
(Transfer of liabilities taken over)			
Realisation account	Dr.	300	
To Bank account			300
(Payment of liquidation expenses)			
Realisation account	Dr.	2,800	
To workmen profit sharing fund account			2,800
(Being loss on payment of W P.S. fund transferred to realisation account)			
Sony Ltd account	Dr.	3,97,775	
To Realisation account			3,97,775
(Entry for purchase consideration)			
Equity shareholders' account	Dr.	69,325	
To Realisation account			69 325
(Loss on realisation transferred to equity shareholders' account)			
Equity shareholders account	Dr.	8,000	
To Preliminary expenses account			8,000
(Transfer of expenses to equity shareholders' account)			
General reserve account	Dr.	40,000	
Insurance fund account	Dr.	10,000	
Workmen compensation fund account	Dr.	8,000	
Profit and loss account	Dr.	80,000	
To Equity shareholders account			1,38,000
(Being transfer of accumulated profits to equity shareholders' account)			

Equity share capital account	Dr.	2,00,000	
Preference share capital account	Dr.	1,00,000	
To Equity shareholders' account			2,00,000
To Preference shareholders' account			1,00,000
(Being transfer of share capital to shareholders' account)			
Provident fund account	Dr.	6,000	
Workmen profit-sharing fund account	Dr	30,800	
To Bank account			36,800
(Being payment of liabilities not taken over by Sony Ltd)			
Bank account	Dr.	1,31,115	
Shares in Sony Ltd	Dr.	2,66,660	
To Sony Ltd account			3,97,775
(Being receipt of purchase consideration)			
Preference shareholders' account	Dr	1,00,000	
To Shares in Sony Ltd account			1,00,000
(Being discharge of amount due to preference shareholders)			
Equity shareholders account	Dr.	2,60,675	
To Shares in Sony Ltd account			1,66,660
To Bank account			94,015

Tutorial Notes 1. Since preference shareholders have priority as to repayment of capital they are paid their dues first of all and they are not required to suffer any loss on account of realisation account or on account of accumulated expenses. 2. Preference shares by definition are non-participating, therefore, they are not entitled to any share in any accumulated reserves or undistributed profits. 3. Since liquidation expenses are included in purchase consideration, the Camy Ltd after having received the amount, is supposed to make the payment It is for this that realisation account is debited with Rs. 300

Illustration 134. (Absorption)

Following is the balance sheet of Zee Ltd :

Liabilities	Rs	*Assets*	Rs
Share capital :		Intangible assets	1,30,000
Equity shares of Rs. 10 each	2,00,000	Fixed assets	3,00,000
General reserve	1,00,000	Current assets	2,00,000
Capital redemption reserve account	1,00,000	Unwritten-off expenses	40,000
Development rebate reserve	40,000		
Debenture redemption account	60,000		
Creditors	1,00,000		
Outstanding bills	70,000		
Rs.	6,70,000	Rs	6,70,000

The purchasing company, Ex Ltd, took away assets except debtors of Rs 30,000. These were later on collected by the Zee Ltd and could realise only Rs 28,000. Ex Ltd also agreed to pay trade liabilities. The purchase consideration is the exchange of three shares of Rs. 20 each in Ex Ltd for two shares in Zee Ltd, fractions total 15 shares which Ex Ltd agreed to pay in cash The cost of liquidation amounted to Rs 500

which the purchasing company agreed to bear. You are required to give journal entries in the books of Zee Ltd and give explanatory notes to justify your treatments. Assume shares of Ex Ltd are quoted in the market at Rs. 52.

What entries will be made if : (*a*) Liquidation expenses are borne by Zee Ltd ; (*b*) Liquidation expenses are borne by Ex Ltd but the payment is made through Zee Ltd.

Solution :

JOURNAL OF ZEE LTD

		Rs.	Rs.
Realisation account	Dr.	6,00,000	
To Intangible assets account			1,30,000
To Fixed assets account			3,00,000
To Current assets account			1,70,000[1]
(Being transfer of assets taken over by Ex Ltd.			
Sundry creditors account[2]	Dr.	1,00,000	
To realisation account			1,00,000
(Being transfer of trade liabilities taken over by Ex Ltd)			
Ex Ltd account	Dr.	6,00,480	
To Realisation account			6,00,480
(Being entry for purchase consideration)			
Realisation account (loss on collection of debtors)	Dr.	2,000	
Bank account (amount collected)	Dr.	28,000	
To Debtors account			30,000
(Being collection of debtors not taken over and transfer of loss on collection to realisation account)			
Realisation account	Dr.	98,480	
To Equity shareholders account			98,480
(Being profit on realisation transferred to shareholders' account)			
Equity share capital account	Dr.	2,00,000	
General reserve account	Dr.	1,00,000	
Capital redemption reserve account	Dr.	1,00,000	
Development rebate reserve account	Dr.	40,000	
Debenture redemption reserve account	Dr.	60,000	
To Equity shareholders account			5,00,000
(Being transfer of accumulated profits and share capital to shareholders account)			
Equity shareholders account	Dr.	40,000	
To Unwritten-off expense account			40,000
(Being transfer of unwritten-off expenses to shareholders account)			
Shares in Ex Ltd account	Dr.	5,99,700	
Bank account	Dr.	780	
To Ex Ltd account			6,00,480
(Being receipt of purchase consideration)			

1. Debtors of Rs. 30,000 included in current assets are not taken over by Ex Ltd and hence not transferred to realisation account.

2. Outstanding bill is not a trade liability.

Bank account Dr.		41,236	
To Shares in Ex Ltd account[1]			15,860
To Profit on sale of shares account			25,376
(Being sale of 793 shares of Rs. 20 each at market price of Rs. 52 each)			
Profit on sale of shares account Dr.		25,376	
To Equity shareholders account			25,376
(Being transfer of profit on sale of shares)			
Equity shareholders account Dr.		5,83,856	
To Shares in Ex Ltd account			5,83,840
To Bank account			16
(Being payment to shareholders)			
Outstanding Bills account Dr.		70,000	
To Bank account			70,000
(Being payment of outstanding bills not taken over by Ex Ltd)			

TUTORIAL NOTES

(1) BANK ACCOUNT

	Rs.		Rs.
To Debtors	28,000	By Equity shareholders	16
To Ex Ltd	780	By Outstanding bills	70,000
To share in Ex Ltd	15,860		
To profit on sale	25,376		
	Rs. 70,016		Rs. 70,016

(2) In order to pay the outstanding bills (not taken over by Ex. Ltd) it is necessary to *sell* some shares.

(3) *Calculation of purchase consideration* :

Purchase consideration is calculated by net payment method.

Number of shares, $3/2 \times 20{,}000$		30,000
Less Fractions		15
Shares issued		29,985
Amount to be paid in shares, $29{,}985 \times$ Rs 20		5,99,700
Amount to be paid in cash for fractions, $15 \times$ Rs 52		780
Total purchase consideration	Rs	6,00,480

(4) *Calculation of shares to be sold in the market*

Amount to be paid to outstanding bills		70,000
Less Amount available :		
Collection from debtors	28,000	
Received from Ex. Ltd	780	
		28,780
Amount to be be collected from the sale of shares	Rs.	41,220

∵ For getting Rs. 52 share required to be sold = 1

∴ For getting Rs. 41,220 share required to be sold = 1/52 × Rs. 41,220 = 792·7 shares or 793 shares.

(5) *Treatment of liquidation expenses* :

(*a*) If the liquidation expenses are met by Zee Ltd.

Realisation account	Dr.	Rs. 500	
To Bank account			Rs. 500

No entry in the books of Ex. Ltd.

(*b*) If expenses are met by Ex. Ltd.

(*i*) In the books of Ex. Ltd.

The amount of Rs. 500 can be included in the purchase consideration. The effect of this will be to debit the Business purchase account and through that the goodwill account. Or, alternatively,

Goodwill account	Dr.	Rs. 500	
To Bank account			Rs. 500

(*ii*) In the books of Zee Ltd.

(*a*) Include the amount in the purchase consideration and then pass the entry.

Realisation account	Dr.	Rs. 500	
To Bank account			Rs. 500
(*b*) Ex. Ltd.	Dr.	Rs. 500	
To Bank account			Rs. 500
Bank account	Dr.	Rs. 500	
To Ex. Ltd.			Rs. 500

Case 2—Illustrations based on Net Asset Method

Illustration 135. (Absorption)

Following is the balance sheet of Axel Ltd :

	Rs.		Rs.
Paid-up share capital of Rs. 10 each	20,000	Goodwill	4,000
Accumulated profits	7,000	Fixed assets	16,500
Debentures	10,000	Current assets	19,500
Creditors	3,000		
	Rs. 40,000		Rs. 40,000

The Major Ltd agreed to take over assets (exclusive of goodwill, one fixed asset of Rs. 4,000 and cash Rs. 1,000 included in current assets) at 10% less than book value, to discharge thereout trade liabilities and to pay Rs 6,000 for goodwill. The purchase price was to be discharged by the issue of 2,000 shares of Rs. 10 each, Rs. 8 called up at a market value of Rs. 15 per share and the *balance in cash*. Liquidation expenses amounted to Rs. 400.

You are required to (*a*) calculate purchase consideration ; (*b*) give journal entries in the books of Axel Ltd. ; and (*c*) give journal entries in the books of Major Ltd.

Solution

Calculation of purchase consideration :

Since the question says that the purchase consideration is to be paid by issuing shares and by paying the *balance* in cash, it is not possible to adopt net payment method of purchase consideration. Net payment method could have been adopted only when the amount paid in cash is also given. The purchase consideration now shall be calculated as per asset method, *i.e.*, assets taken over at revised values *less* liabilities taken over at revised values. In this case it will be as follows :

Goodwill at revised value			6,000
Fixed assets		16,500	
Less Not taken over		4,000	
		12,500	
Less 10%		1,250	11,250
Current assets		19,500	
Less Cash not taken over		1,000	
		18,500	
Less 10%		1,850	16,650
Total assets taken over at revised values	Rs.		33,900
Less Trade liabilities taken over (*i.e.*, creditors)			3,000
Purchase consideration	Rs.		30,900
To be satisfied by :			
Issuing shares, 2,000 × Rs 15			30,000
Paying in cash (balancing figure)			900
Total purchase consideration	Rs.		30,900

JOURNAL OF MAJOR LTD

		Rs	Rs.
Goodwill account	Dr.	6,000	
Fixed assets account	Dr.	11,250	
Current assets account	Dr.	16,550	
To Trade creditors account			3,000
To Liquidator of Axel Ltd account			30,900
Liquidator of Axel Ltd account	Dr	30,900	
To Share capital account (2,000 × Rs. 8)			16,000
To Share premium account (2,000 × Rs. 7)			14,000
To Cash account			900

JOURNAL OF AXEL LTD

		Rs.	Rs.
Realisation account	Dr.	35,000	
To Goodwill account			4,000
To Fixed assets account Rs (16,500 – Rs. 4,000)			12,500
To Current assets account (Rs. 19,500 – Rs. 1,000)			18,500
(Transfer of assets taken over by the purchasing company)			

Trade creditors account To Realisation account (Transfer of trade liabilities taken over by the purchasing company)	Dr.	3,000	3 000
Major Ltd account To Realisation account (Purchase consideration)	Dr.	30,900	30,900
Realisation account To Bank account (Liquidation expenses paid)	Dr.	400	400
Shareholders account To Realisation account (Realisation account transferred	Rs	1,500	1,500
Share capital account Accumulated profit account To Shareholders account (Share capital account and accumulated profit transferred)	Dr. Dr.	20,000 7,000	27,000
Bank account To Fixed assets account (Fixed assets sold)	Dr.	4,000	4,000
Shares in Major Ltd account Bank account To Major Ltd account (Purchase consideration received)	Dr. Dr.	30,000 900	30,900
Bank account To Shares in Major Ltd account (Sale of 300 shares at market price of Rs. 15 per share)	Dr.	4,500	4,500
Debenture account To Bank account (Debentures paid)	Dr.	10,000	10,000
Shareholders account To shares in Major Ltd account (Shareholders paid)	Dr.	25,500	25,500

Tutorial Notes: (*a*) In the absence of any direction about the liquidation expenses it has been assumed that they are borne by Axel Ltd. (*b*) Fixed assets not taken over are sold in the market. It has been assumed that they are sold at book values. (*c*) Debentures not taken over by the purchasing company (trade liabilities include only creditors and bills payable) are paid out by the vendor company. (*d*) In order to pay debentures necessary amount is collected by selling away shares received from Major Ltd. *It has been assumed that shares are sold at the market value. Number of shares necessary for sale is calculated as under :*

		Rs.
Cash received from Major Ltd		900
Add Cash retained		1,000
Add Cash received from sale of fixed assets		4,000
		5,900
Less Paid for liquidation expenses		400
Cash now available for debentures	Rs.	Rs. 5,500
Cash further required for debentures (Rs. 10,000—Rs. 5,500)		Rs. 4,500

Illustration 136. (Absorption)

The following is the balance sheet of Govind Ltd :

	Rs.		Rs.
Issued and paid-up capital :		Intangible assets	50,000
50,000 shares of Rs. 10 each	5,00,000	Fixed assets	4,20,000
Debentures	1,00,000	Current assets	1,10,000
Creditors	50,000	Profit and loss account	70,000
	Rs 6,50,000		Rs. 6,50,000

The Rama Ltd agreed to absorb the above company on the following terms :

(*a*) The shares in Govind Ltd are to be considered as [illegible] each and shares in Ram [illegible] Rs. 10 each fully paid), (*b* [illegible] in cash and the balance in shares which are issued at market price ; (*c*) Rama Ltd agreed to take over all assets and trade liabilities only ; (*d*) Liquidation expenses amounted to Rs 300 agreed to be paid by Govind Ltd. You are required to (*i*) calculate Purchase consideration ; (*ii*) show the Ledger accounts in the books of Govind Ltd ; and (*iii*) Give the opening entries in the books of Rama Ltd

Solution :

Calculation of purchase consideration :

Since the question does not mention any ratio of exchange of shares and the amount of cash, the net payment method of purchase consideration cannot be adopted. Hence the purchase price will be the algebraic sum of assets taken over at *revised* values and liabilities taken over at revised values The market value of assets taken over, though not given in the question directly, can be calculated in a different way as follows :

	Rs
Market value of shares of Govind Ltd 50,000 × Rs. 7	3,50,000
Add Debentures	1,00 000
Creditors	50,000
Market value of assets	Rs 5,00,000

The above market value of assets is calculated on the logic that when company is running in loss the value of its shares in the market is determined mostly on its intrinsic worth. If as per question, a share is quoted at Rs. 7, it means, in the event of liquidation, the company is expected to pay Rs. 7 per share, *i e.*, in all Rs. 3,50,000 to its shareholders. But this amount is available to the shareholders only after the discharge of payment to all its outside liabilities, *i e*, Rs. 1,50,000 (Rs. 1,00,000 + Rs. 50,000). Thus the company is expecting to pay Rs. 1,50,000 to its outside liabilities and Rs. 3,50,000 to its shareholders, *i e*, Rs. 5,00,000 in all. This amount can be collected from the sale of assets. Thus market value of assets is assumed to be at Rs. 5,00,000.

	Rs.
Now purchase consideration is as follows :	
Market value of assets taken over	5,00,000
Less Trade liabilities taken over, *i.e.*, creditors only	50,000
Purchase consideration	Rs. 4,50,000

	Rs.
The purchase consideration is to be discharged as follows :	
In cash $\frac{1}{4}\times$ Rs. 4,50,000	1,12,500
In shares $\frac{3}{4}\times$ Rs. 4,50,000	3,37,500
	Rs. 4,50,000

Books of Govind Ltd.

REALISATION ACCOUNT

	Rs.		Rs.
To Intangible assets account	50,000	By Creditors account	50,000
To Fixed assets account	4,20,000	By Rama Ltd (purchase price)	4,50,000
To Current assets account	1,10,000	By Shareholders account (loss on realisation)	80,300
To Bank account (expenses)	300		
	Rs. 5,80,300		Rr. 5,80,300

SHAREHOLDERS ACCOUNT

	Rs.		Rs.
To Realisation account	80,300	By Share capital account	5,00,000
To Profit and loss account	70,000		
To Bank account	12,200		
To Shares in Rama Ltd	3,37,500		
	Rs. 5,00,000		Rs. 5,00,000

RAMA LTD ACCOUNT

	Rs.		Rs
To Realisation account	4,50,000	By Bank account	1,12,500
		By Shares in Rama Ltd	3,37,500
	Rs. 4,50,000		Rs. 4,50,000

BANK ACCOUNT

	Rs.		Rs.
To Rama Ltd	1,12,500	By Realisation account (expenses)	300
		By Debentures account (payment of liability not taken over)	1,00,000
		By Shareholders	12,200
	Rs. 1,12,500		Rs. 1,12,500

Books of Rama Ltd

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		Rs.	Rs.
Sundry assets account (at revised values)	Dr.	5,00,000	
To Trade creditors			50,000
To Liquidator of Govind Ltd			4,50,000
[illegible]	Dr.	4,50,000	
[illegible]			1,12,500
[illegible] (1)			2,81,250
[illegible] (1)			56,250

Tutorial Notes

(1) Number of shares has been calculated as follows :

For making payment of Rs. 12, share required = 1

∴ For making payment of Rs. 3,37,500 shares required = 3,37,500 ÷ 12 = 28,125

Now share capital and premium can be calculated by multiplying number of shares by Rs. 10 and Rs. 2 respectively.

Illustration 137. The following are the balance sheets as on 31-12-76 of *X* Co. Ltd. and *Y* Co. Ltd. :

Liabilities	*X Ltd.* Rs	*Y Ltd.* Rs.	*Assets*	*X Ltd* Rs	*Y Ltd* Rs
Equity Share Capital (Rs 100 per share)	1,00,000	60,000	Land & buildings	30,000	--
6% Debentures of Rs. 10 each	20,000	—	Plant & machinery	1,10 000	50,000
Reserve Fund	34,000	—	Stock	16 000	8,000
Dividend Equalisation Fund	4,000	—	Debtors	14 000	9,000
Employees' Provident Fund	3,000	—	Cash	3,000	1,000
Trade Creditors	10,000	8,000			
Profit and Loss a/c	2 000	—			
	1,73,000	68,000		1,73,000	68,000

The two companies agree to amalgamate and form a new company called Z Ltd. which takes over the assets and liabilities of both the companies. The authorised capital of *Z* Ltd is Rs 10,00,000 consisting of 1,00,000 equity shares of Rs. 10 each

The assets of *X* Ltd are taken over at a reduced valuation [illegible] with the exception of Land and Buildings which are [illegible] value.

Both companies are to receive 5% of the [illegible] respective business as goodwill The entire purchase [illegible] by Z Ltd in its fully paid shares In return for [illegible] debentures of the same amount and denomination [illegible] Ltd.

Give journal entries to close the books [illegible] show the opening balance sheet of *Z Ltd.*

(B Com [illegible]

Solution.

Calculation of purchase consideration :

		X Ltd.	Y Ltd.
		Rs.	Rs.
Value of assets taken over		1,73,000	68,000
Less : 10% reduction in the value of assets (Except Land and Buildings and cash)		14,000	
		1,59,000	
Less : Liabilities taken over			
Employees Provident Fund	3,000		
Trade creditors	10,000		
		13,000	8,000
		1,46,000	60,000
Add : Goodwill (5% of the net value)		7,300	3,000
Purchase Consideration		1,53,300	63,000

JOURNAL OF X CO. LTD.

Realisation A/c	Dr.	1,73,000	
To Land and buildings			30,000
To Plant and machinery			1,10,000
To Stock			16,000
To Debtors			14,000
To Cash			3,000
Employees Provident Fund account	Dr.	3,000	
Trade creditors account	Dr.	10,000	
To Realisation A/c			13,000
Z Co. Ltd. A/c	Dr.	1,53,300	
To Realisation A/c			1,53,300
Shareholders' A/c	Dr.	6,700	
To Realisation A/c			6,700
Shares in Z Co. Ltd.	Dr.	1,33,300	
Debentures in Z Co. Ltd.	Dr.	20,000	
To Z Co. Ltd. A/c			1,53,300
Share Capital A/c	Dr.	100,000	
Reserve Fund A/c	Dr.	34,000	
Dividend Equalisation Fund A/c	Dr.	4,000	
Profit and Loss A/c	Dr.	2,000	
To Shareholders' A/c			1,40,000
Shareholders' A/c	Dr.	1,33,300	
To Shares in Z Co. Ltd.			1,33,300
6% Debentures A/c	Dr.	20,000	
To Debentureholders' A/c			20,000
Debenture holders' A/c	Dr.	20,000	
To Debentures in Z Co. Ltd			20,000

JOURNAL OF Y CO. LTD.

Realisation A/c	Dr.	68,000	
To Plant and machinery			50,000
To Stock			8,000
To Debtors			9,000
To Cash			1,000
Trade Creditors A/c	Dr.	8,000	
To Realisation A/c			8,000
Z Co Ltd. A/c	Dr.	63,000	
To Realisation A/c			63,000
Realisation A/c	Dr.	3,000	
To Shareholders' A/c			3,000
Shares in Z Ltd	Dr.	63,000	
To Z Ltd. A/c			63,000
Share Capital A/c	Dr	60,000	
To Shareholders' A/c			60,000
Shareholders' A/c	Dr	63,000	
To Shares in Z Ltd.			63,000

BALANCE SHEET OF Z LTD.
as on 31-12-76

Liabilities	Rs	*Assets*	Rs.
Share Capital .		Fixed Assets :	
Authorised—1,00,000 equity shares of Rs 10 each	10,00,000	Goodwill	10,300
		Land and buildings	30,000
Issued, subscribed and paid-up—19,630 equity shares of Rs 10 each	1 96,300	Plant and machinery	1,49,000
		Investments	—
Reserves and Surplus :		Current Assets—Loans and Advances ·	
Employees Provident Fund	3,000	(a) Current assets .	
Secured Loans		Debtors	21,600
Debentures	20,000	Stock	22,400
Unsecured Loans ·		Cash	4,000
Current Liabilities and Provisions :		(b) Loans and advances	—
(a) Current Liabilities	18,000	Miscellaneous Expenditure	—
(b) Provisions	—		
	Rs. 2,37,300		Rs 2,37,300

Case 3—ILLUSTRATIONS BASED ON NET PAYMENT METHOD AND NET ASSET METHOD

Although the purchase consideration is based either on the net assets method or net payments method, it is not uncommon to involve both. In such cases the purchase price calculated by both methods must be equal. Where they are not equal, one has to make the adjustment of the issue price of the shares of the purchasing company. If the purchase price is more by the net assets method, then the issue price will be at premium and where it is less, the issue price will be at discount. An illustration to explain the method is given below.

Illustration 138 The summarised Balance Sheets as on 31-12-1973 of Bharat Ltd and Arjun Ltd are as under :

BHARAT LTD

	Rs.		Rs.
Authorised and Issued Capital—		Buildings	6,00,000
15,000 shares of Rs. 100	15,00,000	Plant & Machinery	6,50,000
General Reserve	2,00,000	Furniture	10,000
P. & L. Account	1,20,000	Stock	3,80,000
Current Liabilities	2,40,000	Debtors	2,30,000
		Cash and Bank balances	1,90,000
	Rs. 20,60,000		Rs. 20,60,000

ARJUN LTD

	Rs.		Rs.
Authorised and Issued Capital		Goodwill	1,00,000
5,000 ordinary shares of Rs.		Plant & Machinery	4,20,000
100	5,00,000	Furniture	5,000
Capital Reserve	50,000	Stock	2,10,000
Revenue Reserve	60,000	Debtors	1,80,000
6% Debentures	3,00,000	Expenses on new project	75,000
Creditors	95,000	Cash and Bank Balances	15,000
	Rs. 10,05,000		Rs. 10,05,000

Arjun Ltd was absorbed by *Bharat Ltd* on 1st *January 1974* on the terms given below :

(*a*) Fixed assets other than Goodwill to be valued at Rs. 5,00,000 including *Rs. 6,000 for Furniture.*

(*b*) Stock to be reduced by Rs. 20,000 and Debtors by 5%.

(*c*) Bharat Ltd to assume liabilities and to discharge the 6% debentures by the issue of 5% debentures and a cash premium of 6%.

(*d*) The new projcet to be valued at Rs. 95,000.

(*e*) The shareholders of Arjun Ltd to receive cash payment of Rs. 30 per share plus four ordinary shares in Bharat Ltd for each five shares held.

(*f*) Bharat Ltd to pay the liquidation expenses of Arjun Ltd amounting to Rs. 6,000.

Draft the Journal entries in the books of Arjun Ltd and show the Balance Sheet of Bharat Ltd after the absorption.

(B. Com. Calicut April 1978)

Solution.

Purchase price of Arjun Ltd :

(1) Net assets method :

	Rs.
Plant and machinery	4,94,000
Furniture	6,000
Stock (reduced by Rs. 20,000)	1,90,000
Debtors (less 5%)	1,71,000
New project	95,000
Cash and bank balances	15,000
Gross assets	9,71,000
Less : Liabilities	95,000
Purchase price equal to net assets	8,76,000

(2) Net Payments method :

	Debentures	Shares	Cash	Total
Debentureholders	3,00,000	—	18,000	3,18,000
Shareholders	—	4,00,000	1,50,000	5,50,000
Liquidation expenses	—	—	6,000	6,000
Total	3,00,000	4,00,000	1,74,000	8,74,000

(3) As there is difference between the prices calculated by the [illegible] methods and as the net assets price is more than the net payments [illegible] the purcha- [illegible] of shares [illegible] share. After this adjustment the two amounts equal.

Tutorial Notes The student may work out the rest of the solution himself.

Sometimes the agreement may provide for the calculation of purchase consideration by the net assets method basically but also involving certain payments to some of the interests in the vendor company. In such cases the purchase price is calculated as follows :

(1) Payment to be made to the shareholders is determined by ascertaining the balance between the assets taken over at market value and liabilities taken over at market value.

(2) To the above *add* any additional payment made either for liquidation expense or for debentures or for any other liability, or purpose.

The illustration given below makes the application more clear.

Illustration 139. (Absorption)

S Ltd sells its business to *P* Ltd, the *latter* to take over the assets at book values and to pay trade liabilities ; *in addition* it is to pay *S* Ltd Rs. 1,000 [illegible] its debentures at a premium of 10% and [illegible] payment of purchase price is to be [illegible] agreed price of Rs 12 per share and the balance in cash.

BALANCE SHEET OF *S LTD.*

	Rs.			Rs
Share capital	30,000	Sundry Assets		51,000
Profit and loss account	2,000	Workmen compensation investment		1,000
Workmen compensation fund	1,000	Debtors	17,000	
Bills payable	4,500	*Less* Provision	1,500	15,500
Creditors	20,000			
Debentures	10,000			[illegible]
	Rs. 67,500			

Give ledger accounts in the books of S Ltd and journal [illegible] the books of *P* Ltd.

Solution :

Calculation of purchase consideration :

Since the exact amount of cash, which forms part of purchase consideration, is not known the net paymant method of purchase consideration cannot be adopted. The purchase price as per net asset method is as follows :

			Rs.
Assets taken over at book value :			
Sundry assets			51,000
Workmen compensation investments			1,000
Debtors			17,000
			69,000
Less Trade liabilities :	Provision	1,500	
	Creditors	20,000	
	Bills payable	4,500	
			26,000
Purchase consideration as per net assets method			Rs. 43,000
The above is to be satisfied by shares, 2,000 × Rs. 12			24,000
by cash (balancing figure)			19,000
Total purchase consideration as per net asset method			Rs. 43,000

But in addition to the above, terms of agreement provide that the company pays for : (*i*) liquidation expenses, and (*ii*) premium on debentures. Thus the total purchase price is :

	Rs.
Price for net assets taken over	43,000
Add Payment for premium on debentures	1,000
Add Payment for liquidation expenses	400
Total purchase consideration as per net assets and net payments method	Rs. 44,400

Books of S Ltd.

REALISATION ACCOUNT

	Rs.		Rs.
To Assets	51,000	By Provision for debtors	1,500
To Workmen compensation fund investments	1,000	By Bills payable	4,500
To Debtors	17,000	By Creditors	20,000
To Debentures (premium)	1,000	By *P* Ltd. (purchase consideration)	44,400
To Bank (expenses)	400		
	Rs. 70,400		Rs. 70,400

SHAREHOLDERS' ACCOUNT

	Rs.		Rs.
To Shares in *P* Ltd	24,000	By Share capital	30,000
To Bank	9,000	By Profit and loss account	2,000
		By Workmen compensation fund	1,000
Rs	33,000	Rs.	33,000

DEBENTURE ACCOUNT

	Rs.		Rs.
To Bank	11,000	By Balance b/d	10,000
		By Realisation account (premium)	1,000
Rs.	11,000	Rs.	11,000

BANK ACCOUNT

	Rs.		Rs
To *P* Ltd. (Rs. 19,000+Rs. 1,000+Rs. 400)	20,400	By Realisation account (expenses)	400
		By Debenture account including *premium*	11,000
		By Shareholders' account	9,000
Rs.	20,400	Rs.	20,400

Books of P Ltd

JOURNAL OF *P* LTD

		Rs.	Rs
Sundry assets account	Dr.	51,000	
Investments account	Dr.	1,000	
Debtors account	Dr.	17,000	
Goodwill account (balancing figure)	Dr.	1,400	
[illegible]			1,500
[illegible]			4,500
[illegible]			20,000
[illegible]			44,400
[illegible]	Dr	44,400	
[illegible]			20,000
[illegible]			4,000
[illegible] 400)			20,400

Case 4—Illustrations based on intrinsic value of shares

In the net assets method purchase consideration is calculated by arriving at the net assets of the selling company. This purchase consideration is discharged by the purchasing company in the form of sha[illegible] debentures and cash. As a slight variation, sometimes a student is [illegible] to calculate the intrinsic value of shares of both the compa[illegible] determine the ratio of exchange of the shares between the [illegible] selling companies. It may be understood that the purchase [illegible] is still equal to the net assets of the selling company. [illegible] feature is the valuation of shares of the purchasing comp[illegible] basis for the purpose of allotme[illegible]t to the shareho[illegible] company. In some cases the student is given the [illegible] shares of both the companies. In such a case there [illegible] the intrinsic values of shares and all that is requ[illegible] basis of the exchange Simple problems invo[illegible]

here and advanced problems are dealt with later at the appropriate places.

Illustration 140 The following are the balance sheets of *A* Ltd and *B* Ltd as on 31-3-1978 :

A LTD

Liabilities	Rs.	*Assets*	Rs.
Share capital—20,000 shares of Rs 10 each	2,00,000	Fixed assets	3,50,000
General reserve	2,50,000	Investments	2,50,000
Profit and loss account	1,50,000	Current assets	3,00,000
Debentures	1,75,000		
Current liabilities	1,25,000		
	Rs. 9,00,000		Rs. 9,00,000

B LTD

Liabilities	Rs.	*Assets*	Rs.
Share capital—9,000 shares of Rs. 10 each	90,000	Fixed assets	1,50,000
General reserve	50,000	Current assets	1,00,000
Profit and loss account	40,000		
Current Liabilities :			
Creditors	50,000		
Bills payable	20,000		
	Rs. 2,50,000		Rs. 2,50,000

A Ltd agrees to take over *B* Ltd. Find out the ratio of exchange of shares on the basis of the intrinsic values.

Solution : (1) *Calculation of intrinsic value of shares* :

		A Ltd		*B* Ltd
		Rs.		Rs.
Assets :				
Fixed Assets		3,50,000		1,50,000
Investments		2,50,000		—
Current Assets		3,00,000		1,00,000
		9,00,000		2,50,000
Less *Liabilities* ;	Rs.		Rs.	
Debentures	1,75,000			
Current Liabilities :				
Creditors	1,25,000		50,000	
Bills payable	—		20,000	
		3,00,000		70,000
Net Assets		6,00,000		1,80,000
Intrinsic value of share		$= \frac{6,00,000}{20,000}$ =Rs. 30		$\frac{1,80,000}{9,000}$ =Rs. 20

(2) *Calculation of Ratio of Exchange :*

This can be done in two ways. The first method is to calculate the L.C.M. of the intrinsic values of shares and the amount so obtained is divided by the intrinsic values to arrive at the ratio of exchange.

L.C.M. of Rs. 30 and Rs. 20 is Rs. 60.

Therefore 2 shares of *A* Ltd. will be equal to Rs. 60.
3 shares of *B* Ltd. will be equal to Rs. 60.

Consequently, the ratio of exchange is two shares of *A* Ltd. for every three shares of *B* Ltd.

[illegible] value of [illegible] on the [illegible]

Net assets of *B* Ltd.	Rs. 1,80,000
Intrinsic value of the shares of *A* Ltd.	Rs. 30
Number of shares of *A* Ltd to be issued	$=\frac{1,80,000}{30}=6,000$

So the ratio of exchange is 6,000 shares of *A* Ltd. for 9,000 shares of *B* Ltd. *i.e.* two shares of *A* Ltd. for every three shares of *B* Ltd.

Illustration 141 The balance sheets of Proud Ltd and Humble Ltd as on 30th June, 1978 were :

Liabilities	*Proud Ltd.* Rs.	*Humble Ltd.* Rs.	*Assets*	*Proud Ltd.* Rs	*Humble Ltd.* Rs.
Share capital :			Fixed assets at cost		
shares of Rs. 10 each	75,000	60,000	less depreciation	95,000	55,000
Reserves	45,000	5,000	*Current Assets* :		
7% debenturss	—	20,000	Stock	25,000	15,000
Trade creditors	28,000	25,000	Trade debtore	30,000	20,000
Provision for taxation	12,000	5,000	Balance at bank	10,000	25,000
	1,60,000	1,15,000		1,60,000	1,15,000

It was agreed that Proud Ltd. should absorb Humble Ltd as on 30th June, 1978 on the basis of the following information.

(1) The adjusted profits for the three years to 30th June, 1978 are :

	Proud Ltd.	*Humble Ltd.*
Year ended 30th June 1976	Rs 47,000	Rs 18,000
Year ended 30th June 1977	48,000	27,000
Year ended 30th June 1978	45,000	30,000

(2) *Humble Ltd.* agreed to repay the 7% Debentures on 30th June, 1978.

(3) The fixed assets of Proud Ltd. have recently been valued at Rs. 1,25,000 and the directors intend to incorporate this revaluat[illegible] in the books of the company.

(4) The shares of Proud Ltd. are to be valued on an

(5) The shares of Humble L[illegible] are to be val[illegible]

with an addition represented by one year's profit based on the average of the three years to 30th June, 1978.

(6) The costs of absorption of Rs. 1,000 are met by Proud Ltd.

You are required

(a) to calculate the ratio of exchange of shares ; and

(b) to give the entries in the books of Proud Ltd. and resulting balance sheet. [Adapted from C.A. (Final) England]

Solution. (a) *Average profits*

	Proud Ltd.	*Humble Ltd.*
	Rs.	Rs.
Year ended 30th June, 1976	47,000	18,000
Year ended 30th June, 1977	48,000	27,000
Year ended 30th June, 1978	45,000	30,000
Total	1,40,000	75,000
Average profits	46,667	25,000

(b) *Intrinsic value of shares*

	Proud Ltd.	*Humble Ltd.*
	Rs.	Rs.
Fixed assets as revalued	1,25,000	55,000
Goodwill	—	25,000
Current assets	65,000	60,000
Gross Assets	1,90,000	1,40,000
Less ; Liabilities (including Debentures in the case of Humble Ltd.)	40,000	50,000
	1,50,000	90,000
Number of shares	7,500	6,000
Value per share	Rs. 20	Rs. 15
Price/Earnings Ratio	3·2	3·6

Note. The Price Earnings Ratio of Humble Ltd. will be 2·6 only, if goodwill is not taken into account. However, having regard to stationary profits in the case of Proud Ltd. and increasing profits (which have nearly doubled) in the case of Humble Ltd., higher valuation of net assets and eventually the shares in the case of the latter company is clearly justified.

(c) *Ratio of exchange of shares* .

Since the intrinsic values of Proud Ltd. and Humble Ltd. are Rs. 20 and Rs. 15 respectively, the ratio of exchange will be three shares in Proud Ltd. for every four shares held in Humble Ltd. Since the shares of Proud Ltd. will be issued at Rs. 20, Rs. 10 should be treated as premium.

JOURNAL OF PROUD LTD.

		Rs.	Rs.
Fixed Assets A/c	Dr.	30,000	
To Capital account			30,000
Business Purchase A/c	Dr.	90,000	
To Liquidator of Humble Ltd.			90,000
Goodwill A/c	Dr.	25,000	
Fixed Assets A/c	Dr.	55,000	
Stock A/c	Dr.	15,000	
Trade Debtors A/c	Dr.	20,000	
Bank A/c	Dr.	5,000*	
To Trade creditors A/c			25,000
[illegible]			5,000
[illegible]			90,000
[illegible]	Dr.	90,000	
[illegible]			45,000
Share premium A/c			45,000
Goodwill A/c	Dr.	1,000	
To Bank A/c			1,000

BALANCE SHEET OF PROUD LTD.

as at 30-6-78 (after absorption)

Liabilities	Rs	*Assets*	Rs.
Share Capital 12,000 shares of Rs. 10 each	1,20,000	Goodwill	26,000
Share Premium	45,000	Fixed Assets	1,80,000
Capital Reserve	30,000	Stock	40,000
Reserves	45,000	Trade Debtors	50,000
Provision for taxation	17,000	Bank	14,000
Trade Creditors	53,000		
Rs.	3,10,000	Rs.	3,10,000

Dissenting Shareholders

Dissenting shareholders are persons who have not given their assent to the scheme of amalgamation entered into by the prescribed majority of shareholders. Such shareholders refuse to transfer their shares to the absorbing company in accordance with the scheme of amalgamation or absorption. Under Section 395 of the Companies Act, the shares of such dissenting shareholders may be acquired by the amalgamated company :

(*a*) on the same terms on which the willing shareholders passed on their shares ; or

(*b*) *on other terms agreed upon between the amalgamated company* and dissenting shareholders ; or

(*c*) on terms ordered by the court on an application made either by the amalgamated company or the dissenting shareholders.

So in some problems, one may come across a different type of settlement with dissenting shareholders. In such cases the paid-up capital held by the dissenting shareholders must be transferred to a separate shareholders' account. Any premium they receive or discount they suffer as per the agreement or the order of the court must be adjusted through realisation account as in the case of Preference shareholders and Debenture-holders. The remaining profit or loss on realisation will be transferred to willing shareholders' account. All balance sheet items pertaining to

*Rs. 20,000 from the bank balance is utilised to pay off debentures.

shareholders will be transferred to majority (willing) shareholders account only.

Illustration 142. The All India Company Limited agrees to acquire, as a going concern, the business of the Presidency Company Limited on the basis of the Vendor's balance sheet at 31st December 1976, which is as follows :

Liabilities	Rs.	*Assets*		Rs.
Authorised Capital—25,000 shares of Rs. 50 each	12,50,000	Freehold property		2,50,000
		Plant and machinery		50,000
		Stock		3,00,000
Issued Capital—20,000 shares of Rs. 50 each	10,00,000	6% Government paper		10,000
		Debtors	2,30,000	
		Less : Reserve	10,000	2,20,000
Called-up Capital—20,000 shares called-up Rs. 30 each	6,00,000			
Reserve fund	1,25,000	Bank		30,000
Creditors	75,000			
Profit and loss account	60,000			
Rs.	8,60,000		Rs.	8,60,000

The All India Company Limited took over all the assets and liabilities of the vendor company, subject to the retention out of such assets of Rs. 15,000, to provide for costs of liquidation, income-tax, etc., and to satisfy any dissentient shareholders.

The consideration for the sale is the allotment to the shareholders in the vendor company of one share of Rs. 100 (Rs. 50 paid-up) in the All India Company for every two shares in the Presidency Company Limited.

The market value of the All India Company's shares, which are Rs. 50 paid-up, at date of sale is Rs. 70 each. The liquidator of the vendor company has paid out of Rs. 15,000 retained; costs of liquidation amounting to Rs. 2,500 ; income-tax Rs. 7,500 and dissentient shareholders of 100 shares at Rs. 32·50 per share, *i.e.*, Rs. 3,250.

The sale and purchase were carried through in terms of the agreement.

Pass the necessary entries in the books of the respective companies.

(B. Com. Madras, Sept. 1977 ; B. Com. Calicut, Oct., 1975)

Solution. Calculation of purchase consideration $= \frac{19,900}{2} \times$ Rs. 50.

$=$ Rs. 4,97,500

JOURNAL OF PRESIDENCY COMPANY LIMITED

		Rs.	Rs.
Realisation A/c	Dr.	8,55,000	
To Freehold property			2,50,000
Plant and machinery			50,000
Stock			3,00,000
6% Government paper			10,000
Debtors			2,30,000
Bank			15,000
Creditors A/c	Dr.	75,000	
Provision for bad debts A/c	Dr.	10,000	
To Realisation A/c			85,000

Realisation A/c	Dr.	10,000	
To Bank A/c			10,000
(Expenses Rs. 2,500, Income-tax Rs. 7,500)			
All India Company Limited A/c	Dr.	4,97,500	
To Realisation A/c			4,97,500
Realisation A/c	Dr.	250	
To Dissentient shareholders A/c			250
Shareholders A/c	Dr.	2,82,750	
To Realisation A/c			2,82,750
Share capital A/c	Dr.	6,00,000	
To Dissentient shareholders A/c			3,000
Shareholder's A/c			5,97,000
Reserve fund A/c	Dr.	1,25,000	
Profit and loss A/c	Dr.	60,000	
To Shareholders' A/c			1,85,000
Dissentient Shareholders' A/c	Dr.	3,250	
To Bank A/c			3,250
Share in All India Co. Ltd	Dr.	4,97,500	
To All India Company Limited			4,97,500
Shareholders' A/c	Dr.	4,97,500	
To Shares in All India Co. Ltd			4,97,500
Shareholders' A/c	Dr.	1,750	
To Bank A/c			1,750

JOURNAL OF ALL INDIA COMPANY LIMITED

		Rs.	Rs.
Business purchase A/c	Dr.	4,97,500	
To Liquidator of Presidency Company Limited			4,97,500
Freehold property A/c	Dr.	2,50,000	
Plant and machinery A/c	Dr.	50,000	
Stock A/c	Dr.	3,00,000	
6% Government paper A/c	Dr.	10,000	
Debtors A/c	Dr.	2,30,000	
Bank A/c	Dr.	15,000	
To Creditors A/c			75,000
To Provision for bad debts A/c			10,000
To Capital reserve A/c			2,72,500
To Business purchase A/c			4,97,500
Liquidator of Presidency Company Limited A/c	Dr	4,97,500	
To Share capital A/c			4,97,500

Tutorial Note: Although the market value of the shares of All India Company Limited is Rs 70, since they are issued only as Rs. 50 paid-up, purchase price is calculated on this basis.

B—INTER COMPANY OWINGS

At the time of absorption many a time it is seen that the purchasing company already stands as a debtor or creditor in the absorbed company's books. This position may be the result of purchase ... taking place between these companies or may be due to ...

by one company to another company. These transactions call for different accounting treatments which can be summarised as follows :

Cancellation of common debts

Books of vendor company. So far as the books of vendor company are concerned there is no effect of these types of transactions on the accounting entries suggested in the earlier part of this chapter. The accounts are closed by transferring them to realisation accounts in the usual way. Any owing to or from the purchasing company is transferred to realisation account under the presumption that the purchasing company has taken over the accounts.

Books of purchasing company. In the books of purchasing company also, the entries for the purchase of business and that for payment of purchase consideration are done in the usual way. But in addition to these entries the extra adjustment entries are needed which are as follows :

(i) *Entry for cancelling the debtors account in the books of vendor company and corresponding creditors account in the books of purchasing company* :

Debit Purchasing company's creditors
Credit Vendor company's debtor

The above entry will have the effect of cancelling the debtor in the vendor company (the purchasing company was already standing in the books of vendor company as one of the debtors either because of loan taken or because of purchase made) and the creditor in the purchasing company (because of the above transaction the purchasing company must have shown the absorbed company as one of the creditors).

(ii) *Entry for cancelling the debtor of the purchasing company and creditor of the vendor company* :

Debit Vendor company's creditor
Credit Purchasing company's debtor

Cancellation of unrealised profits

The purchase and sale transactions also result in profits charged by one company from another company. The situation is worth considering only when the unsold stock (sold by purchasing company) stands as stock at the end in the books of vendor company. When the company is absorbed by the purchasing company the stock of the vendor company (sold by the purchasing company) becomes the stock of the purchasing company itself and thus it results in a sale by the purchasing company to itself. It means that it will result in inflating the profits of the purchasing company by increasing its own stock to sales price. This should be corrected by making the following entry :

Debit Profit and loss account
Credit Stock reserve account

Alternatively, the stock may be taken at cost price while debiting all assets purchased from vendor company. This automatically increases the amount of goodwill which can be written off by debiting the profit and loss account.

It may be noted that no entry is required for adjusting the stock, when goods are sold by the absorbed company to the purchasing company and remain unsold with the purchasing company. This is owing to the fact that the absorption of the company does not cancel the transaction which resulted in the past and also the shareholders of the vendor company will not surrender their profits only because of the absorption of their company by the company to whom they sold goods and charged profits. This is treated as a simple purchase made by the purchasing company from any other company in the market.

Illustration 143. Following are the balance sheets of *S* Ltd. and *P* Ltd as on 31st March, 1970 :

	S Rs	*P* Rs		*S* Rs	*P* Rs
Share capital in Rs. 10	1,00,000	2,00,000	Fixed assets	1,20,000	2,50,000
Reserve fund	40,000	60,000	Loan to *P* Ltd	10,000	—
Workmen compensation fund	10,000	—	Debtors (including *S* Ltd Rs. 5,000)		20,000
Creditors (including *P* Ltd Rs. 5,000)	30,000	—	Debtors	30,000	—
Creditors	—	40,000	Stock	20,000	30,000
Loan from *S* Ltd	—	10,000	Cash at bank	—	10,000
	1,80,000	3,10,000	Rs	1,80,000	3,10,000

P Ltd agreed to absorb *S* Ltd on the following terms : *P* Ltd shall give 1 share of Rs 35 each for every 3 shares in *S* Ltd. You are informed that stock of *S* Ltd includes stock worth Rs 15,000 purchased by them from *P* Ltd which were sold to them at a profit of 20% on cost. The shares of *P* Ltd are quoted in the market at Rs 45 per share. Open ledger accounts of *S* Ltd and give journal entries in *P* Ltd. Draft the balance sheet of *P* Ltd after the purchase of business.

Solution.

Calculation of purchase consideration

Number of shares	$\frac{1}{3}\times 10,000$ =	3,333$\frac{1}{3}$ share
Value of shares (leaving fraction), 3,333 × Rs 35	Rs.	1,16,655
Fraction is to be satisfied in cash which is based on the market value of the share. Thus the amount paid in cash $\frac{1}{3}\times$ Rs 45		15
Total purchase consideration	Rs	1,16,670

Books of *S* Ltd

REALISATION ACCOUNT

	Rs		Rs
To Fixed assets	1,20,000	By Creditors	30,000
To Loan to *P* Ltd	10,000	By *P* Ltd	1,16,670
To Debtors	30,000	By Shareholders-Loss	33,330
To Stock	20,000		
Rs.	1,80,000	Rs	1,80,000

SHAREHOLDERS' ACCOUNT

	Rs.		Rs.
To Realisation account	33,330	By Share capital	1,00,000
To Shares in *P* Ltd	1,16,655	By Reserve fund	40,000
To Bank	15	By Workmen compensation	10,000
Rs.	1,50,000	Rs.	1,50,000

P Ltd

	Rs.		Rs.
To Realisation account	1,16,670	By Share in *P* Ltd	1,16,655
		By Bank	15
Rs.	1,16,670	Rs.	1,16,670

Books of *P* Ltd

JOURNAL

		Rs.	Rs.
Fixed assets of *S* Ltd	Dr.	1,20,000	
Loan	Dr.	10,000	
Debtors	Dr.	30,000	
Stock	Dr.	20,000	
To Creditors			30,000
To Liquidator of *S* Ltd			1,16,670
To Capital reserve			33,330
(Being purchase of assets and liabilities of *S* Ltd)			
Liquidator of *S* Ltd	Dr.	1,16,670	
To Share capital			1,16,655
To Bank			15
(Being payment of purchase consideration)			
Loan from S Ltd (Books of P Ltd)	Dr.	*10,000*	
To Loan to P Ltd (Books of S Ltd now new balance)			*10,000*
(Entry for cancellation of common debt)			
Creditors (Books of S Ltd)	Dr.	*5,000*	
To Debtors (Books of P Ltd)			*5,000*
(Entry for cancellation of common debt)			
rofit and loss of P Ltd (1)	Dr.	*2,500*	
(or *Goodwill* account or capital reserve)			
To Stock (now purchased from S Ltd)			*2,500*†
(Entry for cancellation of unrealised profit on stock left unsold with *S* Ltd)			

BALANCE SHEET OF *P* LTD

		Rs.				Rs.
Share capital			Fixed Assets :			
Shares of Rs. 35 each		1,16,655	*P* Ltd		2,50,000	
Shares of Rs. 10 each		2,00,000	*S* Ltd		1,20,000	3,70,000
Reserve fund		60,000	Debtors :			
Creditors : *P* Ltd	40,000		*P* Ltd		15,000	
S Ltd	25,000	65,000	*S* Ltd		30,000	45,000
Capital reserve	33,330		Stock :			
Less Unrealised profit	2,500	30,830	*P* Ltd		30,000	
			S Ltd	20,000		
			Less Provision	2,500	17,500	47,500
			Cash and bank			9,985
Rs.		4,72,485	Rs.			4,72,485

Tutorial Notes :

(1) 20% on cost = 1/6th on sale. Profit = *1/6* × Rs. 15,000 = Rs. 2,500.

C—INTER COMPANY HOLDINGS*

The problems of absorption become a little more difficult when the companies have interlocked their moneys in the shares and debentures of other companies. These problems can be divided into the following three types :

(a) When purchasing company holds shares in the absorbed company,

(b) When the absorbed company holds shares in the purchasing company, and

(c) When both the companies hold shares in each other.

These have been discussed in the following paragraphs.

Case I—When purchasing company holds shares in the vendor company

In this case the purchasing company being a shareholder of the vendor company has a right to proportionate net assets of the absorbed [illegible] [illegible] ing company issues its own shares and debentures in payment of the purchase consideration. This it does only in respect of amount due to outsiders. For the amount due to itself it cannot receive its own shares. How the accounting is done in the books of the absorbed company (vendor company) and the absorbing company is explained and also illustrated.

Books of the vendor company :

Purchase consideration is calculated for the entire undertaking either by the net assets or net payments method as the case may be. The purchasing company *is debited with the full price, but credited with only* what is received in respect of outsiders. This leaves a debit balance representing the amount still receivable from the purchasing company towards purchase price. Likewise in the shareholders' account, since only outside shareholders are paid, there will be a credit balance representing the amount payable to the purchasing company, as a shareholder of the vendor company. The amount in question is neither paid by the absorbing company as the buyer of the business nor received by it as a shareholder. These two accounts will be closed by means of the following set-off entry.

Debit Shareholders' account
Credit Purchasing companys' account

Books of the purchasing company : As usual, business purchase account is debited with full purchase price crediting the liquidator of the vendor company. [illegible] ing the assets anc [illegible] Goodwill or Capit[illegible] question of settling the amount due to the liquidator arises, payment is shown only in respect of what is due to outsiders and for the balance the shares in the vendor company are surrendered by crediting the account. The entry will appear as under :

* For students preparing for professional and post-graduate examination[illegible]

Debit Liquidator of vendor company (with full purchase price)
Credit Share capital/debenture/Bank (amounts payable to outsiders)

Credit Shares in the vendor company account (amount due to purchasing company)

Any difference in the 'shares in the vendor company account' will be transferred to 'Goodwill or capital reserve,' as the case may be.

Illustration 144. (Net assets method)

Following are the balance sheets of *A* Ltd and *B* Ltd as on 31-3-77 :

A LTD

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Fixed assets	30,00,000
40,000 Equity shares of		Investments	5,00,000
Rs. 100 each	40,00,000	Current assets	65,00,000
General reserve	30,00,000		
Current liabilities	30,00,000		
	Rs. 1,00,00,000		Rs. 1,00,00,000

B LTD

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Goodwill	50,000
20,000 Equity shares of		Fixed assets	3,50,000
Rs. 50 each	10,00,000	Current assets	14,00,000
General reserve	5,00,000		
Current liabilities	1,00,000		
Provision for tax	1,00,000		
Proposed dividend	1,00,000		
	Rs. 18,00,000		Rs. 18,00,000

B Ltd is to be absorbed by *A* Ltd on the following terms :

(1) *B* Ltd declares a dividend of 10% before absorption for the payment of which it is to retain sufficient amount of cash.

(2) The net worth of *B* Ltd is valued at Rs. 14,50,000.

(3) The purchase consideration is satisfied by the issue of fully paid-up shares of Rs. 100 each in *A* Ltd.

Following further information is also to be taken into consideration :

(*a*) *A* Ltd holds 5,000 shares of *B* Ltd at a cost of Rs. 3,00,000.

(*b*) The stocks of *B* Ltd include items valued at Rs. 1,00,000 purchased from *A* Ltd (cost to *A* Ltd Rs. 75,000).

(*c*) The creditors of *B* Ltd include Rs. 50,000 due to *A* Ltd.

Show ledger accounts in the books of *B* Ltd to give effect to the above and balance-sheet of *A* Ltd after completion of the absorption.

[C.A. (Inter) November 1977)]

Solution : Ledger of B Ltd :

REALISATION ACCOUNT

	Rs.		Rs.
To Goodwill	50,000	By Current liabilities	1,00,000
To Fixed assets	3,50,000	By Provision for tax	1,00,000
To Current assets	13,00,000	By A Ltd	14,50,000
		By Shareholders A/c—loss	50,000
	Rs. 17,00,000		Rs. 17,00,000

SHAREHOLDERS' ACCOUNT

	Rs		Rs
To Realisation A/c—loss	50,000	By Share capital	10,00,000
To Shares in A Ltd	10,87,500	By General reserve	5,00,000
To A Ltd (set-off)	3,62,500		
	Rs 15,00,000		Rs. 15,00,000

A LTD ACCOUNT

To Realisation A/c	Rs. 14,50,000	By Shares in A Ltd	Rs. 10,87,500
		By Shareholders A/c (set-off)	3,62,500
	Rs. 14,50,000		Rs. 14,50,000

SHARES IN A LTD ACCOUNT

To A Ltd A/c	Rs. 10,87,500	By Shareholders' A/c	Rs. 10,87,500
	Rs 10,87,500		Rs. 10,87,500

PROPOSED DIVIDEND ACCOUNT

To Current assets	Rs 1,00,000	By Balance b/d	Rs. 1,00,000
	Rs 1,00,000		Rs. 1,00,000

CURRENT ASSETS ACCOUNT

To Balance b/d	Rs. 14,00,000	By Realisation A/c	Rs. 13,00,000
		By Proposed dividend A/c	1,00,000
	Rs. 14,00,000		Rs. 14,00,000

Although not required, entries in the books of the purchasing company are given to facilitate the understanding of the student.

In the journal of A Ltd.

		Rs.	Rs.
Business purchase account	Dr.	14,50,000	
To The liquidator of B Ltd			14,50,000
Fixed assets	Dr.	3,50,000	
Current assets	Dr.	13,00,000	
To Current liabilities			1,00,000
To Provision for tax			1,00,000
To Business purchase account			14,50,000
Liquidator of B Ltd	Dr.	14,50,000	
To Share capital account			10,87,[illegible]
To Shares in B Ltd account			3,62,[illegible]
Shares in B Ltd account	Dr.	62,500	
To Capital reserve			
Bank account	Dr.	25,00[illegible]	
To Profit and Loss account			
Profit and Loss account	Dr.	25,[illegible]	
To Stock-reserve account			

BALANCE SHEET OF A LTD
as on 31-3-77 (after absorption)

Liabilities	Rs.	*Assets*		Rs.
Share capital :		Fixed assets	30,00,000	
Issued and paid-up 50,875 equity shares of Rs. 100 each (5)	50,87,500	Additions during the year	3,50,000	
Reserves and surplus :				33,50,000
Capital reserve (4)	62,500	Investments (1)		2,00,000
General reserve	30,00,000	Current assets (2)		77,50,000
Current liabilities and provisions :				
Current liabilities (3)	30,50,000			
Provision for taxation	1,00.000			
	Rs. 1,13,00,000			Rs. 1,13,00,000

Tutorial Notes :

			Rs.
1.	Investments (total)		5,00,000
	Less Investments in *B* Ltd.		3,00,000
			2,00,000
2.	Current assets :		
	Current assets of *A* Ltd.		65,00,000
Add :	Taken over from *B* Ltd.		13,00,000
	Dividend received from *B* Ltd. (1/4th of proposed dividend)		25,000
			78,25,000
Less :	Stock reserve.	25,000	
	Set-off against creditors	50,000	
			75,000
			77,50,000
3.	Current liabilities		
	Current liabilities of *A* Ltd.		30,00,00
Add :	Current liabilities taken over from *B* Ltd.		1,00,00
			31,00,00
Less :	Set-off against debtors		50,00
			30,50,00

4. Share capital :

Existing capital :	
40,000 shares of Rs. 100 each	40,00,000
Add : Shares issued in payment of net purchase consideration 10,875 shares of Rs. 100 each	10,87,500
Issued share capital :	
50,875 shares of Rs. 100 each	50,87,500

Alternate method

Under this method purchase consideration is not calculated for the entire undertaking. Under the net payments method purchase consideration is calculated on the basis of what is due to outside shareholders and creditors. In the case of net assets method, purchase consideration is calculated for the whole undertaking and then reduced proportionately on the basis of the purchasing company's interest in the vendor company. For example :

BALANCE SHEET OF S LTD

	Rs		Rs
Share capital	4,00,000	Fixed assets	6,00,000
Debentures	1,50,000	Current assets	2,50,000
Profit	2,00,000		
Creditors	1,00,000		
Rs.	8,50,000	Rs.	8,50,000

If Rs. 1,00,000 shares of S Ltd are held by P Ltd and later on P Ltd purchases the assets at Rs. 10,50,000 and takes over creditors at Rs. 90,000, then purchase consideration will be as follows :

	Rs.
Total assets taken over at revised values	10,50,000
Less Liabilities taken over at revised values	90,000
Total purchase consideration on *net asset method*	Rs. 9,60,000

Since the company is liquidated, this consideration is to be distributed *as follows* :

Received by *S* Ltd	9,60,000
Less Debentures to be paid in full	1,50,000
Available for shareholders	8,10,000
Less : Already belonging to *P* Ltd., ¼	2,02,500
For outside shareholders	6,07,500
Thus purchase consideration is :	
For debentureholders	1,50,000
For outside shareholders	6,07,500
Total purchase consideration to be paid by *P* Ltd	Rs. 7,57,500

(*b*) **Cancellation of shares held by the purchasing company.** Since no purchase consideration is to be paid by the purchasing company to the vendor company for that part of shares which are already held by the purchasing company, the vendor company also does not pay out such share capital. The share capital to the extent already held by the purchasing company is closed by transferring to realisation account. Entry is :

Debit Share capital account
Credit Realisation account } (cancellation of shares already held by the purchasing company)

(*c*) **Cancellation of purchasing company's investments.** The purchasing company's investment in the shares and debentures of the vendor company also becomes useless after the liquidation of the vendor company. The investment account (for these investments) is closed by crediting the account and debiting goodwill account or capital reserve account as the case may be.

Illustration 145. The following is the balance sheet of *P* Ltd as on 31st December, 1972 :

	Rs.		Rs.
Share capital in Rs. 10 each fully paid	8,00,000	Fixed assets	8,50,000
5% Debenturss	5,00,000	Current assets	5,10,000
Interest outstanding	25,000	Profit and loss account	2,50,000
Sundry creditors	2,85,000		
Rs.	16,10,000	Rs.	16,10,000

The above company is absorbed by *P* Ltd who holds ¼ of the share capital (purchased by them at Rs. 1,85,000) and all the debentures of *S* Ltd.

The purchase consideration being the taking over of the assets and trade liabilities of *S* Ltd at book value subject to revaluation of fixed assets which were reduced by Rs. 1,50,000 ; payment to outside shareholders Rs. 10 shares issued at par on the basis of such shares, being worth Rs. 15 each and the shares in *S* Ltd being worth Rs. 5 each.

You are required to make necessary journal entries in the books of both the companies. **(Adapted—C.A. Final)**

Solution. Since no ratio of exchange is given in the question, the purchase

consideration cannot be calculated with the help of net payment method. Purchase consideration as per net assets method is as follows :

(a) *Calculation of market value of assets*[1] :

		Rs.
This is calculated indirectly with the help of market value of shares, which is 80,000 × Rs. 5		4,00,000
Add : Payment available for		
Debenture	5,00,000	
Interest outstanding	25,000	
Creditors	2,85,000	
		8,10,000
Total market value of all assets	Rs.	12,10,000

(b) *Calculation of purchase consideration* :

Assets taken over at market value		12,10,000
Less : Liabilities taken over		2,85,000
		9,25,000
Less : Debenture (including interest)[2]		5,25,000
		4,00,000
Less : Money belonging to *P* for ¼th holding		1,00,000
Purchase consideration	Rs.	3,00,000

(c) Purchase consideration is to be satisfied by issuing the shares as follows :

For Rs. 15, the company issues 1 share

∴ For Rs. 3,00,000 " 20,000 shares

Since each share is to be recorded at par, the purchase consideration for book purposes is 20,000 × 10 = Rs 2,00,000 (though actual purchase consideration is Rs. 3,00,000).

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		Rs.	Rs.
Realisation account	Dr.	13,60,000	
To Fixed assets account			8,50,000
To Current assets account			5,10,000
Debenture account[3]	Dr.	5,00,000	
Interest outstanding account[3]	Dr.	25,000	
Creditors account	Dr.	2,85,000	
To Realisation account			8,10,000
P Ltd	Dr.	2,00,000	
To Realisation account (Purchase consideration)			2,00,000

Tutorial Notes

1. See Illustration 134, Page 4.423
2. Since all debentures are with the purchasing company these will have to be taken over by them
3. Debentures are transferred because they are compulsorily taken over by *P* Ltd.

Share capital account[1]	Dr.	2,00,000	
To Realisation account			2,00,000
Shares in *P Ltd* account	Dr.	2,00,000	
To *P* Ltd			2,00,000
Shareholders account	Dr.	1,50,000	
To Realisation account			1,50,000
Shareholders account	Dr.	2,50,000	
To Profit and loss account			2,50,000
Share capital account	Dr.	6,00,000	
To Shareholders account			6,00,000
(Share capital *less* already held by *P* Ltd)			
Shareholders account	Dr.	2,00,000	
To Shares in *P* Ltd.			2,00,000

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		Rs.	Rs.
Fixed assets account (at revised values)	Dr.	7,00,000	
Current Assets account	Dr.	5,10,000	
To Creditors account			2,85,000
To *Debentures in S Ltd account*[2]			*5,00,000*
To *Accrued interest account*[2]			*25,000*
To Liquidator of *S* Ltd account			2,00,000
To Capital reserve account			2,00,000
Liquidator of *S* Ltd account	Dr.	2,00,000	
To Share capital account			2,00,000
Capital reserve account[3]	Dr.	1,85,000	
To Investment in shares of *S* Ltd (at cost price)			1,85,000
(Cancellation of investment in shares of *S* Ltd)			

Tutorial Notes :

[1] 1/4 of the share capital already with *P* Ltd is now not to be paid out by *S* Ltd hence a complete gain.

[2] The credit standing to these accounts will be posted to the debit standing in '*Investments in* Debentures of *S* Ltd Account' and any balance left after the posting will be either capital profit or loss. Since the cost price, at which debentures were purchased by *P* Ltd, is not given, it has not been closed. In the case of shares it has been done, as the cost price of share is given in the question.

[3] Since all the shares have become useless, the amount is treated as capital loss and debited to capital reserve account.

Case 2—When vendor company holds shares in purchasing company

It should be carefully noted that in this case when purchasing company takes over the assets of the vendor company, it cannot buy its own shares (standing *in the* books of the vendor company as assets). Thus to make it simple, it may be said :

(*a*) **Net payment method.** *If* net payment method of purchase consideration is adopted, *deduct* the number of shares already held by the vendor company from the shares agreed to be issued. Thus the shares held by the vendor company before its absorption continue to be with them and are treated as part payment of purchase consideration. *The investment of the vendor company in shares of the purchasing company is not taken over by the purchasing company.* Therefore, the investment in the purchasing company should not be transferred to realisation account.

Sometimes the issue price of the shares now received and the price at which the previous investment has been acquired may differ. In such a case the investment in the purchasing company already made must be revalued by adopting the latest price and any profit or loss on such revaluation must be transferred to shareholders' account.

Illustration 146. *A* Ltd absorbs *B* Ltd by payment of 5 shares of Rs. 10 each at a premium of 10%, for every 4 shares in *B* Ltd. The balance sheet of *B* Ltd as on the date of absorption is given below:

Liabilities	Rs.	*Assets*	Rs.
Share capital (Rs. 10 each)	1,00,000	Fixed assets	90,000
General reserve	10,000	2,000 shares in *A* Ltd	20,000
Creditors	30,000	Current assets	30,000
Rs.	1,40,000	Rs.	1,40,000

Show the important ledger accounts in the books of *B* Ltd and the acquisition entries in the books of *A* Ltd.

Solution.

Purchase consideration :

	No. of shares
Shares to be issued by *A* Ltd $10{,}000 \times \frac{5}{4}$	12,500
Less : Shares already with *B* Ltd	2,000
Net shares to be isssued by *A* Ltd	10,500

$\therefore$ Purshase price $= 10{,}500 \times$ Rs. 11

$=$ Rs. 1,15,500

Ledger of B Ltd

REALISATION ACCOUNT

	Rs		Rs.
To Fixed assets	90,000	By Sundry creditors	30,000
To Current assets	30,000	By *A* Ltd—purchase price	1,15,500
To Shareholders' account—profit	25,500		
Rs.	1,45,500	Rs.	1,45,500

Note : Shares in *A* Ltd are not transferred to realisation account. They will be used to settle the amount due to shareholders.

SHAREHOLDERS' ACCOUNT

	Rs		Rs.
To Shares in *A* Ltd.	1,37,500	By Share capital	1,00,000
		By General reserve	10,000
		By Realisation a/c	25,500
		By Shares in *A* Ltd	2,000*
Rs.	1,37,500	Rs.	1,37,500

Tutorial Notes :

(1) Value of 2,000 shares already held	Rs. 20,000
Revalued at the latest price of Rs. 11 each	Rs. 22,000
Profit on revaluation transferred to shareholders' account	Rs. 2,000

SHARES IN *A* LTD

	Number	Amount Rs.		Number Rs.	Amount
To Balance b/d	2,000	20,000	By Shareholders account	12,500	1,37,500
To Realisation a/c		2,000			
To *A* Ltd.	10,500	1,15,500			
	12,500	1,37,500		12,500	1,37,500

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		Rs.	Rs.
Business purchase account	Dr.	1,15,500	
To The Liquidator of *B* Ltd			1,15,500
Goodwill account	Dr.	25,500	
Fixed assets	Dr.	90,000	
Current assets	Dr.	30,000	
To Sundry creditors			30,000
To Business purchase account			1,15,500
Liquidator of *B* Ltd	Dr.	1,15,500	
To Share capital account			1,05,000
To Share premium account			10,500

'Shares in *A* Ltd, in the books of *B* Ltd cannot be acquired by *A* Ltd, as under the Companies Act a company cannot buy its own shares.

(*b*) **Net assets method.** If net assets method is adopted, do not take into consideration the assets in the form of 'Investment in shares of the purchasing company' for calculating the purchase consideration.

Illustration 147. Following are the balance sheets of *P* Ltd and *S* Ltd :

	P Ltd Rs.	*S* Ltd Rs.		*P* Ltd Rs.	*S* Ltd Rs.
Share capital in Rs. 10 each fully paid	6,00,000	3,00,000	Assets	12,30,000	4,80,000
Reserve	2,00,000	60,000	Shares in *P* Ltd (1,000 shares)	—	1,20,000
Liabilities	4,50,000	2,50,000	Preliminary expenses	20,000	10,000
Rs.	12,50,000	6,10,000	Rs.	12,50,000	6,10,000

The market value of the assets of *S* Ltd (other than investments in *P* Ltd) was Rs. 5,20,000. *P* Ltd agrees to absorb *S* Ltd and pay for liquidation expenses Rs. 500. The shares of *P* Ltd are quoted at Rs. 15 each.

You are required (*a*) to calculate purchase consideration and (*b*) give journal entries in the books of both the companies.

Solution.

Calculation of purchase consideration

Since ratio of exchange of shares is not given, the net assets method of purchase consideration is adopted.

	Rs.
Assets taken over at market value (given)	5,20,000
Add Market value of investment in *P* Ltd, 1,000 × Rs. 15	15,000
Total market value of assets	5,35,000

Less : Liabilities taken over		2,50,000
Purchase consideration as per net assets method		2,85,000
Add : Further payment for expenses		500
Total purchase consideration as per net assets plus net payment methods	Rs.	2,85,500

The above purchase consideration is to be satisfied by the issue of shares as follows :

For making payment ... es	1 share
P Ltd gives	19,000 shares
	19,000
L.	1,000
Net New shares to be issued	18,000 shares
Final purchase consideration :	Rs
Shares (18,000 shares × Rs. 10 (2)	1,80,000
Cash (for liquidation expenses (1)	500
Rs.	1,80,500

[Rest of the problem may be worked out by the student]

(Loss on realisation Rs. 50,000 : Capital reserve Rs. 89,50

Tutorial Note

(1) Rs. 500 for liquidation expenses must be paid in cash.

(2) Since it has not been agreed to issue shares at market value, they hav been considered at paid up value

Case 3 :—When shares are held by both the companies in each other

This is a case of cross-holdings. The calculation of purchase con sideration again depends on the method given in the problem The pro cedure is explained and illustrated under both the methods.

(a) *Net payment method* : Under this method, purchase price calculated as follows :

(1) Calculate the number of shares to be issued to outside shar holders in the absorbed company.

(2) Calculate the number of shares due to purchasing company as shareholder in the vendor company.

(3) Add the shares calculated under (1) and (2) to get the to number of shares.

(4) From the total under (3) deduct the number of shares alrea held by the absorbed company.

(5) Multiply the number of shares arrived at under (4) with issue price and the resultant figure is purchase consideration.

Illustration 148. *A* Ltd is to absorb *B* Ltd by issuing 5 shares of Rs. each at a premium of 10% for every 4 shares held in *B* Ltd. On the d of absorption the balance sheets were as under :

Liabilities	*A Ltd* Rs.	*B Ltd* Rs.	*Assets*	*A Ltd* Rs.	*B Ltd* Rs.
Share capital (shares of Rs. 10 each)	5,00,000	3,00,000	Fixed assets :	4,00,000	2,00,000
General reserve	50,000	40,000	Investments		
Creditors	1,00,000	60,000	6,000 shares in *B* Ltd	80,000	
			5,000 shares in *A* Ltd		60,000
			Current assets	1,70,000	1,40,000
	6,50,000	4,00,000		6,50,000	4,00,000

You are required to show *(a)* the important ledger accounts in the books of *B* Ltd, and (*b*) the acquisition entries in the books of *A* Ltd.

Solution :

Purchase consideration. *No. of shares*

(1) Shares to be issued to outside shareholders

$$\frac{24,000}{4} \times 5 \qquad =30,000$$

(2) Shares due to *A* Ltd (which however will not be issued)

$$\frac{6,000}{4} \times 5 \qquad = 7,500$$

(3) Total of (1) and (2)	37,500
(4) Deduct shares already held by *B* Ltd	5,000
(5) Net number of shares constituting purchase consideration	32,500

(6) Purchase consideration will therefore be 32,500 × Rs. 11 = Rs. 3,57,500

Journal of B Ltd.

REALISATION ACCOUNT

	Rs.		Rs.
To Fixed assets	2,00 000	By Sundry creditors	60,000
To Current assets	1,40,000	By *A* Ltd—purchase price	3,57,500
To Shareholders' a/c —Profit	77,500		
	Rs, 4,17,500		Rs. 4,17,500

A LTD ACCOUNT

	Rs.		Rs.
To Realisation A/c	3,57,500	By Shares in *A* Ltd	2,75,000
		By Shareholders' account —set-off	82,500
	Rs. 3,57,500		Rs. 3,57,500

SHARES IN *A* LTD ACCOUNT

	Rs.		Rs.
To Balance b/d	60,000	By Shareholders account —loss on revaluation	5,000
To *A* Ltd—shares received now	2,75,000	By Shareholders' account —distribution	3,30,000
	Rs. 3,35,000		Rs. 3,35,000

SHAREHOLDERS' ACCOUNT

	Rs.		Rs.
To *A* Ltd—set off	82,500	By Share capital	3,00,000
To Shares in *A* Ltd —loss on revaluation	5,000	By General reserve	40,000
To Shares in *A* Ltd —distribution	3,30,000	By Realisation account —Profit	77,500
	Rs. 4,17,500		Rs 4,17,500

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			Rs	Rs.
(*i*)	Business purchase account	Dr.	3,57,500	
	To the liquidator of *B* Ltd			3,57,500
(*ii*)	Goodwill account (balancing figure)	Dr	77,500	
	Fixed assets	Dr	2,00,000	
	Current assets	Dr	1,40,000	
	To Sundry creditors			60,000
	To Business purchase account			3,57,500
(*iii*)	Liquidator of *B* Ltd	Dr	3,57,500	
	To Share capital account			2,50,000
	To Share premium account			25,000
	To Shares in *B* Ltd account (1)			82,500
(*iv*)	Shares in *B* Ltd	Dr	2,500	
	To Goodwill account (2)			2,500

Tutorial Notes

(1) *A* Ltd will issue net 25,000 shares only. Of the 32,500 shares, 7,500 shares are due to *A* Ltd itself and therefore these will not be issued.

(2) Shares in *B* Ltd' stand in the books of *A* Ltd at Rs 80 000 But these are surrendered to the liquidator at Rs. 82,500 that being the amount due to *A* Ltd The resulting profit of Rs 2,500 is utilised to reduce goodwill arising out of absorption.

(*b*) *Net Assets method*: Under this method the net assets of each company can be ascertained only by solving simultaneous equations

This is so because the value of the share of one company affects the value of the share of the other company. Following steps are necessary:

(1) Calculate the total value of assets of each company by algebraic equation.

(2) From the total assets of the vendor company (calculated as per 1 above) deduct the proportionate value of assets because of the claim of the purchasing company in the vendor company (*see* Case 1)

(3) From the balance thus remaining make one more deduction for the shares of the purchasing company held by the vendor company because purchasing company cannot purchase back its own shares (*see* Case 2).

Illustration 149. Following are the balance sheets of *P* Ltd and *S* Ltd

Liabilities	*P Ltd* Rs	*S Ltd* Rs	*Assets*	*P Ltd* Rs.	*S Ltd* Rs
Shares of Rs 10 each fully paid	1,00,000	50 000	Sundry assets	4 00 000	[illegible]
			1,000 Shares in *S* Ltd	12,000	—
Reserves	3,12,000	1,60,000	1,000 Shares in *P* Ltd		[illegible]
	4,12 000	2,10,000		[illegible]	[illegible]

It was decided that *P* Ltd will absorb *S* Ltd. You are [illegible] calculate purchase consideration

What shall be the purchase consideration if [illegible] absorbed by a new company *PS* Ltd ?

lution :

Step 1. Calculation of total values of assets of each company :

Let total assets of *P* Ltd be p : and total assets of *S* Ltd be s

Therefore,

$p=4{,}00{,}000+\frac{1}{5}\times s$..............I

$s=2{,}00{,}000+\frac{1}{10}\times p$........II

By substituting the values of s in equation I, we have

$p=4{,}00{,}000+\frac{1}{5}\left(2{,}00{,}000+\frac{1}{10}\times p\right)$

$\therefore\ p=$ Rs. 4,48,979

$\therefore$ Value of each share of *P* Ltd $=\frac{4{,}48{,}979}{10{,}000}=$ Rs. 44·90 (approx.)

By substituting the value of p, in equation II we have,

$s=2{,}00{,}000+\frac{1}{10}\times 4{,}48{,}979$

$=2{,}00{,}000+44{,}897$

$=2{,}44{,}897$

Thus, the total value of assets of the absorbed company is Rs. ·4,897.

Step 2. Calculation of purchase consideration :

Since *P* Ltd is already having 1,000 shares in *S* Ltd, therefore, to that ent assets already belong to it and now it need not pay for it. Thus, : purchase consideration is :

Total assets in *S* Ltd	Rs. 2,44,897
Less $\frac{1}{5}$ already belonging to *P* Ltd (*see* Case 1)	48,979
	Rs. 1,95,918

The above purchase consideration is to be further reduced, as the ires of *P* Ltd held by *S* Ltd will continue to survive and the *P* Ltd shall :m them as payment of purchase consideration. This reduction is to done after calculating the number of shares required for satisfying the /ment of Rs. 1,95,918.

$\therefore$ For making payment Rs. 44·90 *P* Ltd issues 1 share

$\therefore$ For making payment of Rs. 1,95,918 *P* Ltd issues $4{,}363\frac{193}{449}$ shares

Shares to be issued by *P* Ltd	4,363
Less already held by *S* Ltd	1,000
New shares to be issued	3,363

Purchase consideration is to be paid by :

(*i*) Issuing 3,363 shares of Rs. 10[1] each 33,630

1. Since it has not been mentioned that shares are to be issued at the new ue, they have been considered at paid-up value. However, the fraction is always d on the basis of new value of shares.

(*ii*) Paying cash for the fraction, *i.e.*, $\frac{193}{449} \times$ Rs. 44·90 19·30

Purchase consideration	Rs.	33,649·30

(*iii*) *Purchase consideration in case of amalgamation:*

		P Ltd Rs.	*S Ltd* Rs.
Total value of shares calculated after taking [illegible]		4,48,979	2,44,897
Less [illegible]		44,898	
Less [illegible]			48,979
Purchase consideration to be paid to each company by *PS* Ltd	Rs.	4,04,081	1,95,918

[illegible] The Prosperous Company [illegible] the Neverdowell [illegible] estments to be [illegible] issue 50 shares [illegible] every 2 shares [illegible] lared before the absorption takes place by the Prosperous Co Ltd.

BALANCE SHEET OF PROSPEROUS CO LTD
As on 31st December, 1964

			Rs
Share capital:		Cash at bank	50,000
1,00,000 equity shares of Rs 10 each, called Rs 5	5,00,000	Stock-in-trade	1,90,000
Trade creditors	3,00,000	Book debts	2,00,000
General reserve	1,00,000	Investments	80,000
Profit and loss account	20,000	Fixed assets	3,00,000
Rs.	9,20,000	Rs.	9,20,000

BALANCE SHEET OF NEVERDOWELL CO LTD
As on 31st December, 1964

	Rs		Rs
Share capital:		Cash at bank	20,000
160 equity shares of Rs. 500 each	80,000	Investment of Prosperous Co Ltd	10,000
Debentures	2,00,000	Stock-in-trade	2,80,000
Sundry creditors	2,00,000	Book debts	1,50,000
		Profit and loss account	20,000
Rs.	4,80,000	Rs.	[illegible]

You are given the following further information: (*a*) The [illegible] of Prosperous Co Ltd include Rs 20,000 in shares of Neverd[illegible] and [illegible]
(*b*) [illegible]
rous [illegible]
Prosperous Co Ltd includes Rs 1,00,000 purch[illegible]
Co Ltd on which the latter has made a profit of Rs [illegible]

Give the necessary journal entries in the boo[illegible] and show the balance sheet of the company after [illegible] well Co Ltd.

Solution :

Purchase consideration :

No. of shares held in Neverdowell Co Ltd by outsiders :

$$\frac{\text{Rs. } 80{,}000 \textit{ less } \text{Rs. } 20{,}000}{500} = 120$$

No. of shares to be issued (gross) as purchase consideration (fifty shares for every two shares) :

$$\frac{120 \times 50}{2} = 3{,}000$$

Shares already held by Neverdowell Co Ltd 2,000 (Rs. 10,000 in shares of Rs 5 each). Thus only 1,000 additional shares have to be issued, (*i.e.*, 3,000—2,000). Purchase consideration is :

1,000 shares issued as fully paid	Rs.	10,000*
Additional amount to make partly paid up shares fully paid up		10,000
Total purchase consideration	Rs.	20,000

*Investment of Neverdowell Co Ltd in the shares of Prosperous Co Ltd is shown at Rs. 10,000 which comes to 2,000 shares of Rs. 10 each, Rs. 5 paid up. Since Neverdowell is going into liquidation, these shares have been made fully paid up by the Prosperous Co Ltd. Additional amount required for making them fully paid up is Rs. 10,000, *i.e.*, 2,000 × Rs. 5.

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		Rs.	Rs.
General reserve account	Dr.	1,00,000	
To Profit and loss account			1,00,000
(Amount transferred from general reserve to pay a dividend of Rs. 1,00,000, 20% on Rs. 5,00,000)			
Profit and loss account	Dr.	1,00,000	
To dividend payable account			1,00,000
(Declaration of dividend of 20% on share capital)			
Business purchase account	Dr.	20,000	
To liquidator of Neverdowell Co Ltd			20,000
(Amount payable to Neverdowell Co Ltd for their business as per agreement dated.........)			
Profit and loss account	Dr.	6,935	
To Shares in Neverdowell Co Ltd			6,935
(Reduction in value of shares in Neverdowell Co Ltd—see calculation as per note)			
Cash at bank account	Dr.	20,000	
Stock account	Dr.	2,80,000	
Sundry debtors account	Dr.	1,50,000	
Dividend payable account (newly created assets on account of dividend)		2,000	
To Provision for bad debts account			10,000
To Debentures account			1,70,000†
To Sundry creditors account			2,00,000
To Business purchase account			20,000
To Debentures in Neverdowell Co Ltd account			30,000**
To Shares in Neverdowell Co Ltd account			13,065††
To Capital reserve account (balancing figure)			8,935
(Various assets and liabilities taken over for Rs. 20,000 from Neverdowell Co Ltd—investments in that company adjusted)			

Share capital account (partly paid)	Dr	10,000	
Liquidator of Neverdowell Co Ltd account	Dr.	20,000	
To share capital account (fully paid)			30,000
(Issue of 1,000 shares (as fully paid) to Neverdowell Co Ltd and making shares already held by that company fully paid)			
Sundry creditors account	Dr	50,000	
To Sundry debtors account			50,000
(Adjustment to eliminate mutual owings)			

Tutorial Note :

(1) Total debentures Rs. 2,00,000 less already held Rs. 30,000

(2) This is cancellation of investment account which includes Rs. 30,000 debentures of Neverdowell Ltd.

(3) This is cancellation of investment account which includes 20,000 shares in Neverdowell Ltd

Note : Intrinsic value of shares in Neverdowell Co Ltd :

Let net assets of Neverdowell Co Ltd be n and of Prosperous Co Ltd be p.

Then n = Assets other than held by P Ltd and investments in P Ltd.

Then $n = 42{,}000 + \frac{2}{100}$

$p = 5{,}00{,}000 + \frac{1}{4}n$

Then $n = 42{,}000 + \frac{2}{100}$

$\left(5{,}00{,}000 + \frac{1}{4}n\right)$

$= 42{,}000 + 10{,}000 + \frac{1}{200}\ n$

$n = 52{,}000 + \frac{1}{200}n$

$200n = 1{,}04{,}00{,}000 + n$

$199n = 1{,}04{,}00{,}000$

$n = 52{,}261$ = Value of 160 shares

Value of 40 shares held by Prosperous Co Ltd

$\frac{52{,}261}{4} = 13{,}065$

Total value of shares in Prosperous Co Ltd

$= \text{Rs. } 5{,}00{,}000 + \frac{1}{4} \times 52{,}261$

$= 5{,}13{,}065$

Intrinsic value of one share (partly paid) :

$\frac{5{,}13{,}065}{1{,}00{,}000} = \text{Rs } 5{\cdot}13$

Intrinsic value of a fully paid share : Rs. 10·13

			Rs.
1	Cash		20,000
	Stock		2,80,000
	Debtors (other than bad debts)		1,40,000
	Dividend receivable (new assets)		2,000
			4,42,000
	Less Debentures and creditors		4,00,000
	Net assets	Rs	42,000

			Rs.
2	Assets other than shares in Neverdowell Co Ltd (Rs 9,20,000 – Rs 20,000)		9,00,000
	Less Creditors	3,00,000	
	Dividend payable	1,00,000	4,00,000
	Net assets		Rs 5,00,000

Since the number of new shares issued is only 1,000, there would be no advantage in recording the issue at only 13 paise above the full value Hence the purchase consideration has been arrived at considering the nominal value of shares and not the intrinsic value.

BALANCE SHEET OF PROSPEROUS CO LTD
As on 1st January, 1965
(AFTER THE ABSORPTION BY PROSPEROUS CO LTD)

Liabilities		Rs.	*Assets*		Rs.
Share Capital :			Fixed assets		4,00,000
98,000 Equity shares of Rs 10 each Rs. 5 per share called up and paid up	4,90,000		Investment (80,000—20,000—30,000)		30,000
3,000 Equity shares of Rs. 10 each, fully paid up for consideration other than cash to the outside shareholders of the Neverdowell Co Ltd on absorption thereof	30,000		Stock-in-trade		4,70,000
		5,20,000	Book debts	3,00,000	
Reserves and Surplus :			*Less* Provision for bad debts	10,000	
Capital reserve		8,935			2,90,000
Profit & loss account (after transfer of Rs. 1,00,000 from general reserve)	1,13,065		Cash at Bank		70,000
Less Equity dividend	1,00,000				
		13,065			
Secured loans :					
Debentures (Rs. 2,00,000—Rs. 30,000)		1,70,000			
Current liabilities & Provision :					
Current liabilities :					
Sundry trade creditors (1)		4,50,000			
Equity dividend Payable (2)		98,000			
	Rs.	12,60,000		Rs.	12,60,000

Tutorial Notes :

(1) Rs. 3,00,000+Rs. 2,00,000—Rs. 50,000
(2) Rs. 1,00,000—Rs. 2,000

Illustration 151. The following are the abridged balance sheets of *P* Co Co Ltd and *S* Co Ltd as at 31st December, 1969.

Liabilities	*P* Ltd Rs.	*S* Ltd Rs.	*Assets*	*P* Ltd Rs.	*S* Ltd Rs.
Share capital	4,00,000	1,50,000	Sundry assets	5,60,000	2,00,000
P and L account	75,000	—	Goodwill	40,000	50,000
Creditors	1,25,000	1,25,000	P & L account	—	25,000
Rs.	6,00,000	2,75,000	Rs.	6,00,000	2,75,000

P Ltd holds 1,000 shares in *S* Ltd at cost Rs. 25,000 and *S* Ltd holds 500 shares in *P* Ltd at cost Rs. 70,000, in each case included in the sundry

assets. The shares of *P* Ltd are of Rs. 100 each, fully paid ; the shares of *S* Ltd are Rs 50 each, Rs. 30 paid. The two companies agree to amalgamate and form a new company *P S* Ltd on the basis that : (*i*) The shares which each company holds in the other [illegible]
at book [illegible]
goodwil [illegible]
The new [illegible]
Rs. 25 paid.

Prepare (*i*) a balance sheet resulting from merger, and (*ii*) a statement showing shareholdings in the new company attributable to the members of the merged companies

(Institute of Company Secretaries, Final 1970)

Solution.

BALANCE SHEET OF *PS* LTD
As at 31st December, 1969

Liabilities	Rs.	*Assets*		Rs.
23,600 shares of Rs 50 each, Rs 25 paid-up (issued for consideration other than cash)	5,90,000	Goodwill :		
Creditors	2,50,000	*P* Ltd	1,50,000	
		S Ltd	25,000	1,75,000
		Sundry Assets :		
		P Ltd	5,35,000	
		S Ltd	1,30,000	6,65,000
Rs.	8,40,000	Rs		8,40,000

STATEMENT OF SHAREHOLDING IN NEW COMPANY

	P Ltd	*S Ltd*
	Rs.	Rs.
Total value of assets (see note below)	5,80,513	1,02,564
Less : Pertaining to shares held by the other company	72,564	20,513
	5,07,949	82,051
Say	5,07,950	82,050

Total purchase consideration to be paid to *P* Ltd and *S* Ltd Rs. 5,07,950 + Rs. 82,050 = Rs 5,90,000

Number of shares in the new company at Rs. 25 per share	20,318	3,282
Number of shares held by outsiders	3,500	4,000
Ratio in which shares are issued	3,500 : 20,318	4,000 : 3,282

In order to issue shares in the above ratio company will use fraction certificates to the necessary extent.

Note : Book value of shares :

Goodwill

Sundry assets other than shares in the other company	5,35,000	1,30,000
	6,85,000	1,55,000
Less : Creditors	1,25,000	1,25,000
Book value of a sets other than shares	Rs. 5,60,000	30.000

If p is the total book value of shares of P Ltd and s of S Ltd, then

$$p = 5{,}60{,}000 + 1/5s$$
$$s = 30{,}000 + 1/8p$$
$$= 30{,}000 + 1/8\ (5{,}60{,}000 + 1/5s)$$
$$= 30{,}000 + 70{,}000 + 1/40s$$
$$= 1{,}00{,}000 + 1/40s$$
$$40s = 40{,}00{,}000 + s$$
$$39s = 40{,}00.000$$
$$s = 1{,}02{,}564$$
$$p = 5{,}60{,}000 + 1/5 + 1{,}02{,}564 = 5{,}80{,}513$$

Book value of one share in S Ltd $1{,}02{,}564 \div 5{,}000 = 20\ 51$

Book value of one share in P Ltd $5{,}80{,}513 \div 4{,}000 = 145{\cdot}13$

Illustration 152. The following balance sheets of *B* Ltd and *A* Ltd as at 31st March, 1968 are given to you :

Liabilities	*B* Ltd Rs.	*A* Ltd Rs.	*Assets*	*B Ltd* Rs.	*A Ltd* Rs.
Share capital :			Sundry fixed assets	12,60,000	20,000
Fully paid up shares of			Sundry debtors	2,30,000	1,80,000
Rs. 100 each	15,00,000	[illegible]	Stock	3,80,000	2,10,000
General reserve	2,00,000	[illegible]	1,0[illegible] shares in *A* Ltd.	1,50,000	—
Profit & loss account	1,60,000	[illegible]	[illegible] in *B* Ltd.	—	5,00,000
Current liabilities	2,00,000	[illegible]	[illegible]	40,000	90,000
6% Debentures	—	[illegible]			
	[illegible]	[illegible]		20,60.000	10,00,0[illegible]

Solution.

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		Rs.	Rs.
General reserve account To Shares in *A* Ltd account (Value of shares in *A* Ltd written down to their intrinsic value of Rs. 94·17 per share.)	Dr.	[illegible]	[illegible]
Profit and loss account To Dividend payable account (Dividend at 8% declared on shares prior to taking over *A*'s business.)	Dr.	[illegible]	[illegible]
Business purchase account To *A* Ltd (Amount payable for purchase of the business of *A* Ltd as per agreement dated……)	Dr.	[illegible]	[illegible]
Sundry fixed assets account	Dr.	[illegible]	
Sundry debtors account	Dr.	[illegible]	
Stock account	Dr.	[illegible]	
Dividend receivable account	Dr.	[illegible]	
Cash at bank account	Dr.	[illegible]	
Goodwill account	Dr.	[illegible]	
To 6% Debentures account			[illegible]
To Current liabilities account			[illegible]
To Business purchase account			[illegible]
To Shares in *A* Ltd			[illegible]
(Various assets and liabilities taken over from *A* Ltd and cancellation of shares already held in *A* Ltd)			
A Ltd	Dr.	[illegible]	
To Cash account			[illegible]
To Share capital account			[illegible]
To Share premium account			[illegible]
(Issue of [illegible] shares @ Rs. [illegible] and payment of cash.)			
Sundry creditors account	Dr.	[illegible]	
To Sundry debtors account			[illegible]
(Cancellation of Rs. [illegible] [illegible] between B Ltd and A Ltd)			

[illegible]

Tutorial Notes

A. *Intrinsic value of shares :*

			B Ltd Rs.	A Ltd Rs.
(i) Assets other than shares			19,10,000	5,00,000
Dividend receivable from B Ltd			—	24,000
			19,10,000	5,24,000
Less : Liabilities :	B Ltd Rs.	A Ltd Rs.		
Current liabilities	2,00,000	90,000		
Dividend payable	1,20,000	—		
6% Debentures	—	3,00,000		
	3,20,000	3,90,000	3,20,000	3,90,000
			15,90,000	1,34,000

(ii) Let total intrinsic value of *B* Ltd. be *b* and of *A* Ltd. *a*

Then $b = 15,90,000 + 1/5a$

And $a = 1,34,000 + 1/5b$

$$b = 15,90,000 + \frac{1}{5}\left(1,34,000 + \frac{1}{5}\ b\right)$$

$$= 15,90,000 + 26,800 + \frac{1}{25}\ b = 16,16,800 + \frac{1}{25}\ b$$

$$25b = 4,04,20,000 + b$$

$$24b = 4,04,20,000$$

$$b = 16,84,167$$

$$a = 1,34,000 + \frac{1}{5} \times 16,84,167 = 4,70,833$$

Intrinsic value of shares in *B* Ltd $\frac{16,84,167}{15,000}$ = Rs. 112·28

Intrinsic value of shares in *A* Ltd $\frac{4,70,833}{5,000}$ = Rs. 94·17

(2) *Purchase consideration :*

	Rs.
Value of 4,000 shares in *A* Ltd. held by outsiders (4,000 × 94·17)	3,76,680
No. of shares in *B* Ltd. required Rs. 3,76,680 ÷ Rs. 112·28	3,354*
Shares already with *A* Ltd.	3,000
Additional shares to be issued	354
Purchase consideration 354 × 112·28	39,747
Cash	93
	39,840

*Plus Rs. 93 cash.

Since goods are left unsold with the purchasing company there is no need for making adjustment for unrealised profit. Unrealised profit is adjusted when goods are sold by the purchasing company and left unsold with the absorbed company.

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'TRUE' or 'FALSE' :

1. The process of two or more companies combining to form a new company is called absorption.

2. When the purchasing company decides to compensate the selling company on the basis of agreed value of assets and liabilities, the method of calculating purchase consideration is called 'Net Payments' method.

3. In the case of amalgamation there are two or more liquidations and one formation.

4. When one existing company takes over the business of another company or companies, it is known as absorption.

5. External reconstruction takes place when a new company is formed to take over the business of an existing company.

6. The aim of reconstruction is to write off past losses and to secure additional working capital.

7. In calculating the purchase consideration by net assets method, all assets including fictitious assets must be taken into account.

8. Workmen's Compensation Fund is a liability and therefore it must be transferred to realisation account.

9. Employees' Profit Sharing Fund is an accumulated profit and therefore must be transferred to shareholders' account

10. Under the net payments method, purchase consideration is arrived at by adding up the payments made to several interests in the vendor company including creditors.

II. Fill in the blanks :

1. Under the net payments method purchase consideration is arrived at by adding up the payments made to in the vendor company.

2. When there are one or more liquidations and no formation it is known as... .

3. When an existing company takes over the business of existing company/companies it is known as... .

4. Items in the nature of accumulated profits or losses in the [illegible] of the vendor company should be transferred to...

5. If preference shareholders or debentureholders are [illegible] more or less in liquidation such amount should be adjusted [illegible]

6. When the purchasing company takes the shares [illegible] company, the set-off entry in the books of the vendor company [illegible] debiting the shareholders' account and crediting the... .

7. Workmen's Compensation Fund in the [illegible] company is transferred to... .

8. When there is one liquidation and one formation it is known as...

9. When there are two or more liquidations and one formation, it is known as... .

III. Indicate the correct answer :

1. *A* Ltd. takes over *B* Ltd, with the exception of creditors and agrees to pay Rs. 5,00,000 to the shareholders of *B* Ltd. Creditors stood at Rs. 1,00,000. The purchase consideration is to be taken as

(*a*) Rs. 5,00,000
(*b*) Rs. 6,00,000
(*c*) Rs. 4,00,000.

2. *A* Ltd. takes over *B* Ltd. and agrees to discharge debentureholders of *B* Ltd. at a premium of 5%. The premium should be debited in the books of the vendor company to

(*a*) Realisation account
(*b*) Shareholders' account
(*c*) Profit and loss account.

3. When two or more companies liquidate to form a new company it is called

(*a*) Amalgamation
(*b*) Absorption
(*c*) Reconstruction.

4. When the purchasing company allots shares at market price the calculation of purchase consideration is based on

(*a*) Market price
(*b*) Paid-up value
(*c*) Average of the above two.

5. Liquidation expenses paid by the purchasing company are to be debited to

(*a*) Preliminary expenses account
(*b*) Business purchase account
(*c*) Liquidation expenses account.

6. Absorption is said to take place when

(*a*) a company is formed to take over another company
(*b*) two or more companies are liquidated to form a new company
(*c*) two or more companies liquidate to be taken over by an existing company.

7. *A* Ltd. takes over the net assets of *B* Ltd. valued at Rs. 8,00,000 and agrees to pay Rs. 5,00,000 to equity shareholders, Rs. 2,00,000 to preference shareholders and the balance to debentureholders. The purchase consideration paid by *A* Ltd. is

(*a*) Rs. 5,00,000
(*b*) Rs. 7,00,000
(*c*) Rs. 8,00.000.

8. *X* Ltd acquires the business of *Y* Ltd. whose net assets as per the balance sheet work out to Rs. 5,00,000. *X* Ltd. agrees to pay Rs. 3,50,000 to equity shareholders, Rs. 2,50,000 to preference shareholders and Rs. 2,00,000 to debentureholders. The purchase consideration agreed to be paid is

(*a*) Rs. 8,00,000
(*b*) Rs. 6,00,000
(*c*) Rs. 5,00,000

9 *A* Ltd takes over *B* Ltd and agrees to allot its shares. The intrinsic values of shares of *A* Ltd and *B* Ltd are Rs. 150 and Rs. 100 respectively. The basis of exchange on intrinsic value between *A* Ltd and *B* Ltd should be

(*a*) One share of *A* Ltd for one share of *B* Ltd
(*b*) Two shares of *A* Ltd for three shares of *B* Ltd
(*c*) Three shares of *A* Ltd for two shares of *B* Ltd.

Problems

1. The following is the balance sheet of *X* Co. Ltd as on 31st December 1977 :

Liabilities	Rs.	*Assets*	Rs.
Capital—12,000 shares of Rs. 10 each fully paid up	1,20,000	Land and buildings	[illegible]
		Machinery	[illegible]
		Stock	[illegible]
Sundry creditors	35,000	Sundry debtors	[illegible]
Bank overdraft	25,000	Profit and loss account	[illegible]
	Rs. [illegible]		Rs. [illegible]

THE IRON ORE CO LTD

Liabilities	Rs.	*Assets*		Rs.
Capital :		Land and buildings		3,00,000
5,000 Ordinary shares of Rs. 100		Machinery and plant		2,00,000
each fully paid	5,00,000	Sundry debtors	55,000	
Contingency fund	10,000	*Less* Reserve for		
Sundry creditors	58,000	doubtful debts	5,000	
Bills payable	42,000			50,000
		Stock		25,000
		Cash at bank		35,000
	Rs. 6,10,000			Rs. 6,10,000

THE PIG IRON CO LTD

Liabilities	Rs.	*Assets*	Rs.
Nominal capital :		Land and buildings	5,00,000
2,00,000 Ordinary shares of		Machinery and plant	3,00,000
Rs. 10 each	20,00,000	Goodwill	1,00,000
Issued :		Stock	60,000
1,00,000 Ordinary shares of		Sundry debtors	1,20,000
Rs. 10 each fully paid	10,00,000	Cash at bank	1,00,000
Reserve	60,000		
Sundry creditors	1,20,000		
	Rs. 11,80,000		Rs. 11,80,000

Show the journal entries in the books of the company that is being absorbed and the opening balance sheet of the Pig Iron Co Ltd.

(B. Com., Delhi, 1961)

[*Purchase consideration without including amount of liquidation expenses Rs. 6,00,000 ; Profit on realisation Rs. 90,000 ; Balance sheet total Rs. 18,80,000 ; Additional amount of goodwill Rs. 1,00,000*]

3. The Moon Co Ltd and the Rising Star Co Ltd have agreed to amalgamate. A new company Sunshine Co Ltd has been formed to take over the combined concerns as on 31st December, 1965. After negotiations, the assets of the two companies have been agreed at as shown in the following balance sheet :

THE MOON CO LTD

Liabilities	Rs.	*Assets*	Rs.
Issued capital :		Land and buildings	5,00,000
1,00,000 Ordinary shares of		Machinery and plant	2,00,000
Rs. 10 each fully paid up	10,00,000	Patents	1,10,000
Sundry creditors	80,000	Stock	1,50,000
Profit and loss		Sundry debtors	1,20,000
(Undistributed balance)	50,000	Cash at bank	50,000
	Rs. 11,30,000		Rs. 11,30,000

THE RISING STAR CO LTD

Liabilities	Rs.	Assets	Rs.
Issued capital :		Land and buildings	3,00,000
50,000 Ordinary shares of Rs. 10 each	5,00,000	Machinery and plant	2,50,000
Sundry creditors	50,000	Goodwill	50,000
Reserve fund	50,000	Stock	20,000
Profit and loss (Undistributed balance)	50,000	Sundry debtors	20,000
		Cash at bank	10,000
Rs.	6,50,000	Rs.	6,50,000

Show how the amount payable to each company is arrived at and prepare the amalgamated balance sheet of the new company.

(B.A. Pass, Delhi 1966)

[Shareholders of the Moon Company Ltd will get 1,05,000 shares and those of the Rising Star Company Ltd will get 60,000 shares ; Balance sheet total Rs. 17,80,000]

4 With a view to effecting economy in working, the United Mills Limited agrees to take over the business of the Bharat Hosiery Limited, from 31st October, 1967. The following is the balance sheet of the Bharat Hosiery Limited as on that date :

Liabilities	Rs	Assets	Rs.
Paid up capital :		Land and buildings	3,80,000
12,000 shares of Rs. 50 each	6,00,000	Plant and machinery	1,25,000
Reserve fund	1,20,000	Stock	2,50,000
Reserve for doubtful debts	10,000	Debtors	2,90,000
Creditors	75,000	Cash at bank	25,000
Profit and loss	65,000		
Rs.	8,70,000	Rs.	8,70,000

The purchasers took over all the assets and liabilities of the vendor company excepting a sum of Rs. 10,000 to provide for cost of liquidation [illegible]

[illegible]

Rs. 70 per share, *viz.*, Rs. 7,000.

Pass the necessary journal entries in the books of the respective companies to give effect to the above transactions. (B. Com. Delhi 1967)

[Purchase consideration R[illegible] before considering the lo[illegible] shareholders ; total of [illegible] new balance sheet Rs 8,60,000 ; Capital reserve [illegible]

Note : It is better to show reserve for doubtful [illegible] side of balance sheet by way of [illegible] of debtors.

5. Rahu Ltd decided to absorb Chand[illegible]
The summarised Balance Sheet of Chandra [illegible]

Liabilities	Rs.	Assets	Rs.
Share capital :		Fixed assets :	
50,000 Equity shares		Land and buildings	3,00,000
of Rs. 10 each	5,00,000	Furniture	25,000
General reserve	2,50,000	Plant and machinery	5,55,000
Profit and loss account	1,20,000	Current assets :	
5% Debentures	1,00,000	Stocks	70,000
Sundry creditors	30,000	Sundry debtors	35,000
		Cash at bank	10,000
		Cash in hand	5,000
Rs.	10,00,000	Rs.	10,00,000

Rahu Ltd agreed to take over all the assets and liabilities of Chandra Ltd. The current assets were to be taken over at their book value but the fixed assets were revalued as follows :

Land and Buildings	Rs. 3,50,000
Furniture	15,000
Plant and Machinery	6,00,000

Rs. 50,000 was to be paid for goodwill.

The purchase consideration was paid as Rs. 2,55,000 in cash and the balance in fully paid equity shares of Rahu Ltd.

The absorption was duly carried out on 1st July 1976 and the expenses of absorption amounted to Rs. 5,000 paid by Chandra Ltd.

You are required to show the journal entries to close the books of Chandra Ltd. **(I.C.W.A. Final, December 1976)**

[*Purchase consideration Rs. 11,05,000 ; Profit on realisation Rs. 1,30,000*]

6. Deva Ltd and Asura Ltd carrying on similar businesses agreed to amalgamate by transferring their undertakings to a new company Devendra Ltd.

The balance sheets of the two companies as on the date of transfer were as follows :

Liabilities	*Deva Ltd* Rs.	*Asura Ltd* Rs.	*Assets*	*Deva Ltd* Rs.	*Asura Ltd* Rs.
Share capital :			Land and buildings	4,65,000	2,55,000
Equity shares of Rs. 100 each	5,00,000	3,00,000	Plant and machinery	5,60,000	3,58,000
6% Preference shares of Rs. 100 each	5,00,000	2,50,000	Furniture and fittings	79.000	34,000
5% Debentures	—	40,000	Stock	81,500	52,000
General reserve	2,00,000	70,000	Debtors	56,000	24,600
Profit and Loss A/c	1,15,000	55,000	Cash at bank	87,000	22,500
Sundry creditors	75,000	35,000	Cash in hand	6,400	3,900
			Preliminary expenses	55,100	—
Rs.	13,90,000	7,50,000	Rs.	13,90,000	7,50,000

The terms of agreement were as follows :

(*a*) The purchase consideration consisted of—

(*i*) the assumption of liabilities of both the companies,

(ii) the discharge of the debentures in Asura Ltd at a premium of 5% by the issue of 7% debentures in Devasura Ltd

(iii) the issue of 10 equity shares of Rs. 10 each at a premium of Rs 2 per share for each preference share held in both the companies,

(iv) the issue of 10 equity shares of Rs. 10 each at a premium of Rs. 2 per share and Rs 22 in cash for each equity share in Deva Ltd and 5 equity shares of Rs. 10 each at a premium of Rs. 2 per share and Rs. 80 in cash for every equity share in Asura Ltd.

(b) All the assets and liabilities of the two companies were taken over at their book value except that a provision at 5% was to be raised on debtors

(c) In order to raise working capital and to pay the purchase considerations Devasura Ltd decided to issue 30,000 equity shares of Rs. 10 each at a premium of Rs 2 50 per share

You are required to—

(a) Pass journal entries in the books of Deva Ltd to close its accounts, and

(b) Show the opening balance sheet of Devasura Ltd.

(I.C.W.A. Final, December 1977)

[Purchase consideration : Deva Ltd Rs 13,10,000 ; Asura Ltd Rs. 7,62,000 ; Loss on realisation Deva Ltd Rs 49,900 ; Asura Ltd Rs. 5,000 ; Balance sheet total Rs 25,57,000]

[illegible] amalgamate [illegible]

ABAD LIMITED

	Rs		Rs
Paid-up capital 3,000 equity shares of Rs. 10 each	3,00,000	Goodwill	70,000
Profit and loss account	50,000	Stock	1,80,000
5% debentures	70,000	Debtors	2,00,000
Sundry creditors	30,000		
	Rs. 4,50,000		Rs 4,50,000

NABAD LIMITED

	Rs		Rs
Paid-up capital 20,000 equity shares of Rs 10 each	2,00,000	Stock	80,000
Profit and loss account	42,000	Debtors	2,20,000
Sundry creditors	58,000		
	Rs 3,00,000		Rs. 3,00,000

The average profits of Abad Limited and Nabad Limited have been Rs. 30,000 and Rs 20,000 respectively. Kamyab Limited agrees with the two companies to take over both concerns for the sum of Rs 6,00,000 and in addition to discharge all liabilities; Rs. 1,00,000 to be paid in cash and the balance in shares at face value.

It is agreed that the Debtors of Abad Limited and Nabad Limited

before being taken over by Kamyab Limited, will be written off to th extent of 10% of their respective book figures.

The profit on conversion is to be divided between the shareholders o Abad Limited and Nabad Limited in the same proportion as to the profits previously earned by them.

Draw up Purchases Account on the completion of the transfer in the books of Kamyab Limited. Also show how the Share Capital Account in Abad Limited and Nabad Limited should be closed.

(C.A. Intermediate May 1975)

[*Profit on conversion Rs. 50,000 ; Share of Abad Ltd Rs. 30,000 ; Share of Nabad Ltd Rs. 20,000 ; Purchase consideration : Abad Ltd Rs. 3,60,000, Nabad Ltd Rs. 2,40,000 ; Realisation account : Abad Ltd Profit Rs. 10,000, Nabad Ltd loss Rs. 2,000*]

8. White Ltd agreed to acquire the business of Green Ltd as on December 31, 1964 on which date the balance sheet of Green Ltd was summarised as follows :

Liabilities	Rs.	*Assets*	Rs.
Capital (in fully paid shares of Rs. 10 each)	6,00,000	Goodwill	1,00,000
General reserve	1,70,000	Land and buildings	3,00,000
Profit and loss account	1,10,000	Plant	3,40,000
6% Debenturs	1,00,000	Stock	1,68,000
Creditors	20,000	Debtors	56,000
		Cash	36,000
Rs.	10,00,000	Rs.	10,00,000

The consideration payable by White Ltd was : (*i*) a cash payment Rs. 2·50 for every share in Green Ltd ; (*ii*) the issue of 90,000 Rs 10 at an agreed value of Rs. 12·50 per share ; and (*iii*) the issue of ch an amount fully paid 5% debentures in White Ltd at 96% as is fficient to discharge the 6% debentures in Green Ltd at a premium of %.

The directors of White Ltd valued land and buildings at Rs. 4,00,000 l plant at Rs. 4,50,000 and created a provision of 5% on debtors against btful debts. The expenses of liquidation Rs. 6,000 were paid by ite Ltd. Give journal entries to close the books of Green Ltd and to rd the acquisition of business in the books of White Ltd.

(C.A. Nov. 1974 ; B. Com. Madras 1976 ; B. Com. Andhra 1974 ; B. Com. Delhi 1966 ; B. Com. Calicut 1974 ; B. Com. Poona 1977 ; B. Com. Bombay 1975)

[*Purchase consideration (after including payment for liquidation expenses) Rs. 14,01,000 ; Profit on realisation Rs. 3,95,000 ; Final payment to shareholders Rs. 12,75,000 ; Further increase in goodwill Rs. 2,13,800 ; Balance sheet total Rs. 13,90,000 : Bank overdraft will appear at Rs. 1,20,000*]

. 1. 1,250 Debentures of Rs, 100 each at 4% discount will be issued.
2. Discount on debentures Rs. 5,000 will be shown on the assets side]

. The business of the India Traders Limited :

Neo Indo Trading Co Limited. The purchase consideration is to be discharged as follows:

(1) A payment in cash at Rs. 20 for every share in the India Traders Limited; (2) A further payment in cash at Rs. 60 for every debenture in the India Traders Limited in full discharge of the debentures; and (3) An exchange of 3 shares in The Neo Indo Trading Co Limited of Rs. 8 each (quoted in the market at Rs. 16) for every share in the India Traders Limited.

The balance sheet of the India Traders Limited stood as follows at the date of purchase:

INDIA TRADERS LIMITED
BALANCE SHEET

Liabilities	Rs	*Assets*		Rs.
Capital: 800 shares of Rs 50 each	40,000	Land and buildings		15,000
120 6% debentures of Rs. 50 each	6,000	Plant and machinery		20,000
Capital redemption reserve account	4,000	Furniture and fittings		1,000
Creditors	4,200	Stock		10,000
Profit and loss account	1,000	Debtors	10,000	
		Less Provision for bad debts	1,000	
				9,000
		Cash		200
	Rs. 55,200			Rs 55,200

Give journal entries in the books of both the companies and the important ledger accounts in India Traders books. Liquidation expenses Rs. 400 are borne by Neo Indo Trading Co Limited.

(Adapted from B. Com. Bangalore, 1971) 32 4

[*Realisation loss Rs. 9,800; Purchase consideration Rs 42,400*]

10. The Balance sheet of Agency Limited as at 31st December 1971 was as under:

Liabilities	Rs.	*Assets*	Rs
Paid-up capital		Goodwill	30,000
10,000 6% preference shares of Rs. 10 each	1,00,000	Fixed assets	3,00,000
20,000 equity shares of Rs 10 each	2,00,000	Stock	80,000
Reserve	10,000	Debtors	70,000
Profit and loss account	20,000	Bank balance	15,000
6% Debentures	1,20,000	Preliminary expenses	5,000
Sundry creditors	50 000		
	Rs. 5,00,000		Rs 5,00,000

A new company Principal Limited was formed to acquire the business of Agency Limited, which was to be wound up. Principal Limited acquired the assets of Agency Limited, with the exception of book debts and cash, but took over no liabilities, agreeing, however, to collect the debts and pay the creditors as an agent of Agency Limited.

The purchase consideration was to be satisfied as follows:

(1) The Preference shareholders of Agency Limited were to be allotted 6 Preference shares of Rs. 10 each in Principal Limited for every five shares held, and the equity shareholders of Agency Limited were to be allotted five equity shares of Rs. 10 each credited as Rs. 9 paid for every four shares held.

(2) Sufficient 7% Debentures in Principal Limited would be issued to enable the liquidator of Agency Limited to satisfy the existing debentureholders by new debentures at a premium of 10 per cent.

The expenses of liquidation were Rs. 5,000.

Of the debtors, Rs. 2,000 proved bad and a discount of 2 per cent had to be allowed on settlement.

Creditors were paid off subject to a 4% discount on Rs. 25,000.

Show the ledger accounts necessary to close the books of Agency Limited.

(C.A. Intermediate May 1976)

[*Purchase consideration Rs. 4,77,000, Profit on realisation Rs. 27,640*]

11. On 1st January 1971, the balance sheet of *H* Ltd was as follows :

Liabilities	Rs.	*Assets*	Rs.
Authorised and issued share capital :		Goodwill	40,000
5,000 6% Cumulative preference shares of Rs. 10 each fully paid up	50,000	Patents	15,000
15,000 Equity shares of Rs. 10 each fully paid	1,50,000	Sundry other assets	1,64,500
6% Debentures	30,000	Cash	500
Creditors	20,000	Profit and loss account	28,000
Preference dividends in arrears for four years		Preliminary expenses	2,000
Rs.	2,50,000	Rs.	2,50,000

A scheme of reconstruction was agreed upon as follows : A new company to be formed called *J.* Ltd with an authorised capital of Rs. 3,25,000 all in equity shares of Rs. 10 each ; (*ii*) One equity share Rs. 5 paid, in the new company to be issued for each equity share in the old company ; (*iii*) Two equity shares, Rs. 5 paid, in the new company to be issued for each preference share in the old company ; (*iv*) Arrears to be cancelled ; (*v*) Debentureholders to receive 3,000 equity shares in the new company credited as fully paid : (*vi*) Creditors to be taken up by the new company ; (*vii*) The remaining unissued shares to be taken up and paid in full by the directors ; (*viii*) The new company to take over the old company's assets except patents, subject to writing down 'sundry assets' by Rs. 35,000 ; and (*ix*) Patents were realised by *H* Ltd for Rs. 1,000.

Close the books of *H* Ltd and open the books of *J* Ltd by means of journal entries and give the balance sheet of *J* Ltd. Expenses of *H* Ltd came to Rs. 1,000

[B. Com. (H), Delhi, 1972 ; B. Com. Kerala, 1972, Modified]

12. The balance sheet of *A* Company Ltd on 31st December, 1979, was as follows :

Liabilities	Rs.	Assets	Rs.
Share capital (Authorised and issued)		Land and buildings	40,000
625 Equity shares of Rs. 60 each, fully paid	37,500	Plant and machinery	1,24,000
Debentures and interest account	1,10,000	Sundry debtors	40,000
Sundry creditors	30,000	Preliminary expenses	5,000
General reserve	21,500	Sinking fund investments (at cost)	20,000
Debenture redemption sinking fund	20,000	Cash in hand	1,000
Profit and loss account	11,000		
Rs.	2,30,000	Rs.	2,30,000

A company Ltd went into voluntary liquidation on 31st December, 1970, and its business was absorbed by *B* company Ltd on the following terms :

(*i*) *B* Company Ltd to take over Land and buildings, Plant and machinery and *investments at book value, sundry debtors* at *Rs. 35,000* and goodwill at Rs. 31,000 ;

(*ii*) *B* Company Ltd to take over sundry creditors ;

(*iii*) Purchase price to be satisfied by the issue of 1,250 fully paid equity shares of Rs. 60 each, of which the market value was Rs 80 each ;

(*iv*) Liability to debenture-holders, including interest, to be met by the issue of Rs. 1,20,000 7% debentures by the *B* Company Ltd.

The cash Rs 1,000 just sufficed for the expenses, which *A* Company Ltd had to meet. The transactions with *B* Company Ltd and the distribution to shareholders was completed on 31st January, 1971. Pass entries giving effect to the above scheme in journals of both companies.

[B Com (Hons.), Delhi, 1971]

13. The Books of Sickunit Ltd contained the following balances on 31st December, 1975 :

	Dr.	*Cr.*
Share capital—12,000 equity shares of 10 Rs. each	—	1,20,000
Creditors		1,40,000
Patents	1,20,000	
Plant and machinery	40,000	
Stock	30,000	
Debtors	50,000	
Cash	1,250	
Preliminary expenses	7,250	
Profit and loss A/c	11,500	
	2,60,000	2,60,000

The Company being unable to raise further Capital and the Patents standing in the books at a figure largely in excess of its value, the following scheme was submitted to the Shareholders and Creditors :

(*a*) The Company to go into voluntary liquidation and

company New United Ltd to be formed with an authorised capital Rs. 2,00,000 to take over the assets and liabilities.

(*b*) Liability to the creditors to be discharged by the new compa[ny] as follows :

25 paise in the rupee by payment in cash and 50 paise in the rupe[e] by the issue of 6% debentures in the new company.

(*c*) 12,000 shares of Rs. 10 each, Rs. 5 per share paid, to be issue[d] to the shareholders of old company, the balance of Rs. 5 per share bein[g] payable on allotment.

(*d*) The expenses of liquidation amounted to Rs. 1,750 to be paid by the new company as part of the purchase consideration.

Assuming that the scheme has been approved and sanctioned, **you** are asked to prepare the following in the books of the old company :

(*i*) Realisation A/c

(*ii*) Shareholders' A/c

(*iii*) Statement of purchase consideration.

(B. Com., Bombay October 1976)

14. The following is the Balance Sheet of Small Ltd. as on 30-6-1976 :

Liabilities	Rs.	*Assets*	Rs.
4,000 Equity shares of		Buildings	1,70,000
Rs. 10 each	4,00,000	Plant and machinery	4,00,000
General reserve	50,000	Investments	50,600
Profit and loss A/c	5,600	Debtors	1,40,500
5% Debentures	2,50,000	Stock	80,700
Creditors	1,28,700	Cash at bank	16,500
Dividend equalisation fund	24,000		
Rs.	8,58,300	Rs.	8,58,300

Small Ltd was absorbed by Big Ltd on the above date on the following terms and conditions :

Big Ltd to :

(*a*) Assume all liabilities and to acquire all assets *except* Investments which were sold by Small Ltd for Rs. 45,500.

(*b*) Discharge the debenture debt at a discount of 5 per cent by issue of 7% debentures in Big Ltd.

(*c*) Issue two shares of Rs. 60 each in Big Ltd at Rs. 65 per share and also pay Rs. 2 in cash to the shareholders of Small Ltd in exchange for *one* share in Small Ltd.

(*d*) Pay the cost of absorption Rs. 1,500.

With the consent of the Shareholders, the Liquidator of Small Ltd sold off in open market, one-fourth of the shares received from Big Ltd at the average rate of Rs. 63 per share.

Prepare :

(*i*) Statement of purchase consideration

(*ii*) Realisation A/c
(*iii*) Shareholders' A/c
(*iv*) Bank A/c

in the books of Small Ltd (B. Com , Bombay October 1976)

[Hint : Credit the sale proceeds of shares received from Big Ltd to 'Shares in Big Ltd account' and transfer the loss to realisation account. Alternatively, the loss can be directly debited to shareholders' account without routing through realisation account.

15 The following is the balance sheet of *X* Co Ltd as on June 30, 1970 :

Liabilities	Rs	*Assets*	Rs.
Share capital :		Goodwill	35,000
2,000 shares of Rs. 100 each	2,00,000	*Land and buildings*	85,000
Reserve fund	20,000	Plant and machinery	1,60,000
5% Debentures	1,00,000	Stock	55,000
Loan from *A* (a director)	40,000	Sundry debtors	65,000
Sundry creditors	80,000	Cash at bank	34,000
		Discount on debentures	6,000
Rs	4,40,000	Rs.	4,40,000

The business of the *X* Co Ltd is taken over by *Y* Co Ltd as on that date on the following terms : (*a*) *Y* Co to take over all assets except cash, to value the assets at book value *less* 10% except goodwill which is to be valued at 4 years *purchase of the excess of average* (5 years) profits over 8% of the combined amount of share capital and reserve, (*b*) *Y* Co to take over trade liabilities which was subject to a discount of 5%. (*c*) The purchase consideration was to be discharged in cash to the extent of Rs. 1,50,000 and the balance in fully paid equity shares of Rs. 10 each valued at Rs 12 50 per share. The average of the five years' profits was Rs. 30,100 The expenses of absorption, Rs. 4,000, were paid by *X* Co Ltd but afterwards reimbursed by *Y* Co Ltd

Show the necessary journal entries in the books of *X Co Ltd* and *Y* Co Ltd.

(B. Com., Madurai 1970 ; B Com , Andhra, 1971, Modified) 32 5

(*Purchase consideration Rs. 3,02,500 ; Loss on realisation Rs. 17,500*)

16. The balance sheet as on December 31, 1970 of the Delta Co Ltd was as follows :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Land and buildings	65,000
1,000 share of Rs. 100 each		Machinery	22,000
fully paid up	1,00,000	Furniture	3,000
8% Debentures	40,000	Stock	25,000
Creditors	6,000	Debtors	15,000
		Cash	4,000
		Profit and loss account	12,000
Rs.	1,46,000	Rs.	1,46,000

It was decided to reconstruct the company and for this purpose a new company called the Omega Co Ltd was formed with nominal capital of Rs. 1,00,000 divided into 500 9% preference shares of Rs. 100 each and 500 equity shares of Rs. 100 each to

of the Delta Co Ltd on the following basis : (*a*) The debenture-holders in Delta Co Ltd are to accept 400 preference shares ; (*b*) The shareholders of Delta Co Ltd are to receive one equity share in Omega Co Ltd for every two shares held by them ; and (*c*) The cost of liquidation amounting to Rs. 600 is paid by the new company. The balance of preference shares has been issued and taken up by the public.

Give important ledger accounts in the books of Delta Co Ltd and journal entries in the books of Omega Co Ltd.

(B. Com., Bangalore, 1971, Modified) 32·7

(Purchase consideration Rs. 90,000 ; Loss on realisation Rs. 38,000 ; Capital reserve in the books of Omega Co Ltd Rs. 38,000 ; Goodwill in the books of Omega Co Ltd Rs. 600)

17. The following is the balance sheet of *ABC* Co Ltd on December 31, 1970 :

Liabilities	Rs	*Assets*	Rs.
Capital :		Land and buildings	1,20,000
20,000 shares of Rs 10 each	2,00,000	Plant and machinery	1,50,000
Debentures	1,00,000	Work-in-progress	30,000
Sundry creditors	30,000	Stock	60,000
Reserve fund	25,000	Furniture and fittings	2,500
Workmen's compensation fund	10,000	Sundry debtors	25,000
Dividend equalisation fund	10,000	Cash at bank	12,500
P & L appropriation account	5,100	Cash in hand	100
Depreciation provision :			
Land and buildings	20,000		
Rs.	4,00,100	Rs.	4,00,100

The company is absorbed by *XYZ* Co Ltd on the above date. The consideration for the absorption is the discharge of the debentures at a premium of 5 per cent, taking over the trade liability and a payment of Rs. 7 in cash and one share of Rs 5 in *XYZ* Co Ltd at the market value of Rs. 8 per share in exchange for one share in *ABC* Co Ltd. The cost of liquidation Rs. 500 is to be met by the purchasing company.

Pass journal entries in the books of both the companies. Show how the purchase price is arrived at.

(B Com., Kanpur, 1970, B. Com., Andhra 1972 ; B. Com , Madras, 1972 ; B. Com , Madurai, 1973 ; B. Com. Delhi, 1973 ; Modified) 32·

(Purchase consideration Rs. 4,05,000 ; Profit on realisation Rs. 49,900

18. Enterprise Ltd has just recovered from a great financial difficulty. Its balance sheet as on December 31, 1971 is as follows :

Liabilities	Rs	*Assets*	Rs
Equity share capital	6,00,000	Buildings	4,00,000
5% Preference share capital	4,00,000	Plant and machinery	2,00,000
Liabilities	1,50,000	Current assets	2,00,000
		Profit and loss account	3,50,000
Rs.	11,50,000	Rs.	11,50,000

Enterprise (1972) Ltd is formed to take over buildings at Rs. 3,00,000, Plant and machinery Rs. 1,40,000 and *stock Rs. 60,000.*

Purchase consid... ...ference shares ... in the ratio ... preference shares. ... allotment of

Sundry debtors realised Rs. 1,50,000 and Rs. 1,10,000 was paid to creditors in full settlement. *There is* no other current asset except stock and debtors. Cost of winding up amounted to Rs. 10,000.

Show ledger accounts in the books of Enterprise Ltd and journal entries in the books of Enterprise (1972) Ltd. Also draft balance sheet of Enterprise (1972) Ltd. (B. Com, Mysore 1971) 32·11

[*Purchase consideration Rs. 9,00,000 ; Profit on Realisation Rs. 2,80,000*]

19. Ajanta Limited agreed to acquire the business of Elora Limited as on 31st December, 1925.

The Balance Sheet of Elora Limited as on that date was as under :

Liabilities	Rs.	*Assets*	Rs.
Paid-up capital .		Fixed Assets :	
1,000 6% Preference shares of Rs. 100 each	1,00,000	Land and buildings	2,00,000
20,000 equity shares of Rs 10 each	2,00,000	Machineries	1,00,000
Reserve	20,000	Current Assets :	
Profit and loss account	30,000	Stock	2,00,000
7% Debentures	1,00,000	Debtors	50,000
Sundry creditors	1,50,000	Cash and bank balance	35,000
		Miscellaneous expenditure	
		Preliminary expenses	10,000
		Debenture discount	5,000
Rs.	6,00,000	Rs.	6,00,000

The consideration payable by Ajanta Limited was agreed as under :

(1) The Preference Shareholders of Elora Limited were to be allotted 8% Preference Shares of Rs. 1,10,000.

(2) Equity shareholders to be allotted six equity shares of Rs. 10 each issued at a premium of 10% and Rs. 3 cash against every five shares held.

(3) 7% Debenture-holders of Elora Limited to be paid 8% premium by 9% debentures at 10% discount.

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Limited. The machineries were valued at book value.

It was agreed that before acquisition Elora Limited will pay dividend at 10% on equity shares. Liquidation expenses are Rs. 5,000.

Draft journal entries necessary to close the books of Elora Limited and to record acquisition in the books of Ajanta Limited. (C.A. Inter ...

[*Realisation profit Rs. 61,000 ; Purchase consideration* ...

20. The summarised balance sheets of the T... at March 31, were as follows :

	Thick Ltd Rs.	Thin Ltd Rs.		Thick Ltd Rs.	Thin Ltd Rs.
Issued share capital :			Goodwill	—	30,000
Shares of Rs 10 each fully paid	2,00,000	1,50,000	Fixed assets at cost, less depreciation	1,60,000	50,000
Trade liabilities	25,000	60,000	Floating assets	95,000	80,000
Profit and loss account	30,000	—	Profit and loss account	—	50,000
Rs.	2,55,000	2,10,000	Rs.	2,55,000	2,10,000

The management of Thick Ltd resolved to take over the business of Thin Ltd with effect from April 1. The shareholders of the latter company agreed to accept shares in the former company on the basis that the shares of Thick Ltd were worth Rs. 12·50 each and that the shares of Thin Ltd were worth Rs. 5 each. The purchasing company took over the fixed assets of Thin Ltd together with the floating assets and not required to pay the liabilities.

Assuming the necessary formalities were carried out, make journal entries necessary for these transactions in the books of Thick Ltd and draw up its balance sheet immediately after the merger.

(B. Com., Osmania, 1971) 32·12

(Purchase consideration Rs. 1,35,000 ; Balance sheet total Rs 3,90,000)

21. *B* Co Ltd had the following balance sheet as on 31-3-1978 :

B CO LTD

Liabilities	Rs.	*Assets*	Rs.
Share Capital :		Fixed assets	83,00,000
50,000 shares of Rs. 100 each	50,00,000	Current assets	69,00,000
Capital reserve	10,00,000	Investments	17,00 000
General reserve	36,00,000	Goodwill	2,00,000
Unsecured loans	22,00,000		
Sundry creditors	42,00,000		
Provision for taxation	11,00,000		
Rs.	1,71,00,000	Rs.	1,71,00,000

B Co Ltd is amalgamated with Beesons Ltd as on 31-3-1978, on which date the balance sheet of Beesons Ltd is as follows :

BEESONS LIMITED

Liabilities	Rs.	*Assets*	Rs.
Share Capital :		Fixed assets	1,60,00,000
8,00,000 Shares of Rs. 10 each	80,00,000	Current assets	1,68,00,000
General reserves	1,00 00,000		
Secured loans	40,00,000		
Sundry creditors	46,00,000		
Provision for tax	52,00,000		
Provision for dividend	10,00,000		
Rs.	3,28,00,000	Rs.	3,28,00,000

For the purposes of the amalgamation the goodwill of *B* Co Ltd is considered valueless. There are also arrears of depreciation in *B* Co Ltd amounting to Rs. 4,00,000. The shareholders in *B* Co. Ltd are allotted, in full satisfaction of their claims, shares in Beesons Limited in the same proportion as the respective intrinsic values of the shares of the two companies bear to one another.

Pass journal entries in the books of both the companies to give effect to the above. (C. A. Inter Nov. 1978)

[*Intrinsic value of shares : B Co. Ltd Rs. 180 ; Beesons Ltd. Rs. 22.50; Purchase consideration Rs. 90,00,000*]

22. The following figures relate to Bombay Bleachings Ltd and Calcutta Chemicals Ltd on March 31, 1965. They propose to sell their undertakings to a new company, Amalgamated Bleachings and Chemicals Ltd, to be formed for this purpose.

	Bombay Bleachings Ltd Rs	*Calcutta Chemicals Ltd* Rs.		*Bombay Bleachings Ltd* Rs	*Calcutta Chemicals Ltd* Rs.
Paid-up capital :			Fixed assets *less* depreciation	55,52,000	29,78,000
(Rs. 100 shares)	80,00,000	—	Stocks, stores, etc.	31,22,000	21,42,000
(Rs. 10 shares)	—	40,00,000	Book debts	24,78,000	17,04,000
Reserve and surplus of profit and loss account	26,00,000	14,00,000	Investments—(4½% Govt Securities)	6,00,000	—
Creditors	15,20,000	20,20,000	(6% Municipal Debentures)	—	4,00,000
			Cash and bank balances	3,68,000	1,96,000
Rs	1,21,20,000	74,20,000	Rs.	1,21,20,000	74,20,000

Profit for the year ended on :	*Bombay Bleachings Ltd.* Rs.	*Calcutta Chemicals Ltd.* Rs.
31-3-65	12,10,000	6,30,000
31-3-64	11,80,000	7,24,000
31-3-63	11,08,000	8,18,000

Assuming that a return of 10 per cent is expected on the capital employed in the business and valuing goodwill at 5 years' purchase of super profits in the case of Bombay Bleachings Ltd and at 3 years' purchase of super profits in the case of Calcutta Chemicals Ltd work out the basis on which the amalgamation should be made. The market price of the 4½ per cent Govt. Securities on March 31, 1965 was Rs 90 per hundred and of the 6 per cent municipal debentures on the same day was Rs. 95 per hundred. (I C W A., January, 1966) 32 14

(*Purchase consideration : Bombay Bleachings Rs 1,11,00,000 , Calcutta Chemicals Rs 59,3[illegible]*)

23. *A* Limited and *B* Limited agreed to amalgamate their businesses. The scheme envisaged the formation of *C* Limited with a share capital equal to the combined capitals of *A* Limited and *B* Limited for the purpose of acquiring the assets, liabilities and undertakings of the two companies in exchange for shares in *C* Limited.

The balance sheets of *A* Limited and *B* Limited as [illegible] 1968 (the date of amalgamation) are [illegible]

Liabilities	*A Ltd* Rs.	*B Ltd* Rs.	*Assets*	*A Ltd* Rs.	*B Ltd* Rs.
Authorised and issued capital	1,00,000	1,40,000	Fixed assets (exclusive of goodwill)	1,20,000	1,80,000
Reserves	1,70,000	1,00,000	Stock	60,000	1,10,000
Creditors	40,000	90,000	Debtors	80,000	1,30,000
Bank overdraft	—	90,000	Balance with bank	50,000	—
Rs.	3,10,000	4,20,000	Rs.	3,10,000	4,20,000

The consideration was to be based on the net assets of companies as shown in their books on December 31, 1968, but subject to an addition to compensate *A* Limited for its super profit record. This addition was to be the weighted average of the net profits of *A* Limited for three years ended December 31, 1968. The weights for this purpose for the calendar years 1966, 1967 and 1968 were agreed as 1, 2 and 3 respectively. The profits had been : Year ended December, 31, 1966 Rs. 20,000, Year ended December 31, 1967, Rs. 80,000, Year ended December 31, 1968, Rs. 1,20,000.

The shares in *C* Limited were to be issued to *A* Limited and *B* Limited at a premium and in proportion of the agreed net assets value of those companies.

In order to raise working capital, *C* Limited increased its authorised share capital by Rs, 2,00,00,000 and proceeded to issue 12,000 shares of Rs. 10 each at a price of Rs. 15 per share.

(*a*) You are required to calculate the number of shares issued to *A* Limited and *B* Limited ; (*b*) To show journal entries in the books of *A* Limited and *B* Limited to reflect the takeover ; and (*c*) To prepare the summarised balance sheet of *C* Limited after the issue of shares.

(I.C.W.A., 1968, 1970 ; I.C.W.A., England, 1966, Modified) 32 15

[*Compensation to A for super profit Rs. 90,000 : Purchase consideration A Limited Rs. 3,60,000, B Limited Rs. 2,40,000 ; Profit on realisation for A Limited Rs. 90,000 ; Balance sheet total of C Limited Rs. 10,00,000*]

24. Given below are the balance sheets as at 30th June, 1971 of Aspi Ltd. and Bina Ltd. which are amalgamated to form a new company Kashmira Limited :

	Aspi Rs.	*Bina* Rs.		*Aspi* Rs.	*Bina* Rs.
Equity shares of Rs. 100 each fully paid	2,00,000	2,50,000	Goodwill	75,000	25,000
Profit and loss	80,000	—	Building	90,000	80,000
Building fund	70,000	—	Machinery	50,000	40,000
Accident fund	10,000	—	Patents	15,000	5,000
Creditors	60,000	90,000	Investments	65,000	—
Loans	20,000	70,000	Debtors	64,000	1,23,000
			Stock	55,000	70,000
			Cash and bank	26,000	2,000
			Profit and loss	—	65,000
Rs.	4,40,000	4,10,000	Rs.	4,40,000	4,10,000

The scheme of amalgamation is as under :

(*i*) Kashmira Ltd shall take over all the assets and liabilities excluding loans of Aspi Ltd at an agreed value of goodwill of Rs. 1,00,000 ; (*ii*) Aspi Ltd shall receive from Kashmira Ltd as payment of purchase consideration, Rs. 14,000 in cash and the balance in fully paid equity shares in Kashmira Ltd ; (*iii*) Eventually Aspi Ltd shall fully pay off its loans together with accrued interest of Rs. 1,000 ; (*iv*) All the liabilities [illegible]

[illegible]

profit of 25 per cent. You are requested to show Ledger accounts closing the books of either Aspi Ltd or Bina Ltd. (B Com , Bombay, 1971)

[*Bina Ltd : Loss on realisation Rs. 10,000 ; Final payment to equity shareholders Rs. 1,00,000 in cash and Rs 75,000 in shares ; Aspi Ltd : Purchase consideration Rs 4,05,000 ; Profit on realization Rs. 24,000 Final payment to equity shareholders Rs. 3,84,000*]

Note. Loss on account of accrued interest and profit on sale of building have been dealt with through the realisation account.

25. Two companies, *A* Co Ltd and *B* Co Ltd, engaged in business of a similar nature, agreed to amalgamate and form a new company called the *A* and *B* Co Ltd. The new company was registered with an authorised capital of Rs. 40,00,000 in shares of Rs. 10 each, to take over the assets and liabilities of both the companies subject to the following adjustments :

[illegible] *A* Co Ltd [illegible] 2 years' purchase of [illegible]

(*b*) The goodwill of *B* Co Ltd was to be considered worthless

(*c*) The plant and machinery of *A* Co Ltd were to be taken at Rs. 10,50,000 while the buildings of *B* Co Ltd at Rs 11,00,000.

(*d*) The debentures of *A* Co Ltd were to be discharged by the issue of 6% debentutes of *A* and *B* Co Ltd at a preminm of 10%.

(*e*) The debtors and bills receiveable of *A* Co Ltd were to be taken over subject to a provision of 10% and 5% respectively, while cash and debtors of *B* Co Ltd were to be retained by the liquidator of that company to be utilized for paying off creditors, bills payable and outstanding liabilities.

(*f*) The employees' savings bank deposits standing in the books of *A* Co Ltd were agreed to by the employees of that company to be transferred to the *A* and *B* Co Ltd.

On the date of amalgamation, *i.e.*, 31-12-1976, the Balance Sheets of the amalgamating companies were as under :

A Co Ltd
BALANCE SHEET *as at 31-12-1976*

Liabilities	Rs.	Assets	Rs.
Share Capital :		Land and buildings	7,00,000
Issued & subscribed :		Plant & machinery	11,00,000
50,000 share of		Furniture & fittings	2,00,000
Rs. 10 each	5,00,000	Stock	3,00,000
Reserve fund	10,00,000	Debtors	1,50,000
Contingency Reserve	1,00,000	Bills receivable	40,000
6% Debentures	5,00,000	Bank	1,00,000
Creditors	1,00,000	Cash	10,000
Employees' provident fund	2,00,000		
Employees' savings deposits	1,50,000		
Outstanding liabilities	50,000		
	Rs. 26,00,000		Rs. 26,00,000

B Co Ltd
BALANCE SHEET *as at 31-12-1976*

Liabilities	Rs.	Assets	Rs.
Share capital :		Goodwill	1,00,000
Issued and subscribed :		Land & buildings	10,00,000
1,50,000 shares of Rs. 10 each	15,00,000	Plant & machinery	1,00,000
		Furniture & fittings	50,000
Creditors	1,00,000	Stock	1,40,000
Bills payable	50,000	Debtors	1,00,000
Outstanding Liabilities	20,000	Bank	80,000
		Profit and loss account	1,00,000
	Rs. 16,70,000		Rs. 16,70,000

The *A* and *B* Co Ltd allots 1,50,000 shares of Rs. 10 each and Rs. 1,30,000 shares of Rs. 10 each, respectively to each of the amalgamating companies and pays the balance due to the *A* Co Ltd in cash.

Show the computation of purchase consideration payable to the two companies and prepare the balance sheet of the *A* and *B* Co Ltd, as on 1-1-1977 assuming that the cash payment is not made till after a later date. (B. Com. Banglore, 1977)

26. Messrs. *A* Co Ltd and *B* Co Ltd agree to amalgamate and a new company under the name and style of *C* Corporation Ltd was formed for this purpose with a nominal share capital of Rs. 60,00,000 divided into 3,00,000 equity shares of Rs 20 each. Messrs *C* Corporation Ltd takes over all the assets and liabilities of both the companies and in exchange pays *A* Co Ltd Rs. 40,00,000 in equity shares of Rs. 20 each at par and to *B* Co Ltd Rs. 15,0 ,000 in equity shares of Rs. 20 each at par and Rs. 2,00,000 in cash.

Messrs C Corporation Ltd also pays liquidation expenses of Messrs *A* Co Ltd Rs. 18,000 and of Messrs *B* Co Ltd Rs. ,000. The preliminary expenses of *C* Corporation Ltd amount to Rs. 36,000. These sums are writen off against capital profit of the company. The following are the (summarised) balances extracted from the accounts of the two companies:

	A Co Ltd		B Co Ltd	
	Rs.	Rs.	Rs.	Rs.
(1) Share capital		30,00,000		15,00,000
(2) Goodwill	5,00,000		2,00,000	
(3) Frehold property	19,12,000		9,05,600	
(4) Plant and machinery	7,05,000		4,31,200	
(5) Stocks	3,75,200		2,53,700	
(6) Debtors	2,53,100		1,30,500	
(7) Cash at bank	5,52,100		62,600	
(8) Creditors		1,72,400		1,13,600
(9) General reserve		10,00,000		1,00,000
(10) Secured loans		—		2,00,000
(11) Profit and loss account		1,25,000		70,000
	42,97,400	42,97,400	19,83,600	19,83,600

The amalgamation was duly completed Messrs *C* Corporation Ltd paid off the secured loans after amalgamation.

You are required to prepare: (*a*) Necessary ledger accounts (including cash account) in the books of Messrs C Corporation Ltd; and (*b*) *Balance sheet of Messrs C Corporation Ltd after amalgamation*

(C A Final, 1972)

[*Goodwill: A Ltd Rs. 3,93,000; B Ltd Rs. 2,42,000; Balance sheet total Rs. 57,86,000; Purchase consideration A Ltd Rs. 40,18,000, B Ltd Rs. 17,12,00*

Note. Goodwill is the balancing figure. The values Rs. 5,00,000 and Rs. 2,00,000 have been ignored.

27. M/s Sipiem Ltd was incorporated on 21st April 1970, with an authorised share capital of Rs. 50,00,000 in equity shares of Rs. 10 each. The company has issued 20,000 equity shares for cash at a premium of Rs. 2·50 per share and the same were fully paid. There was no business until 30th June 1970, on which day the company decided to purchase the running business of M/s Indikat Ltd and M/s Syndikat Ltd by the issue *of shares of Rs. 10 each in Sipiem Ltd at premium of Rs. 2·50 per share.*

For the purpose of determining the number of shares in Sipiem Ltd to be issued the assets and liabilities were to be taken at their book values. However, goodwill is to be determined at two and a half years' purchase of the average profits of past 3 years, after deducting a standard profit 10 per cent on capital employed as shown by the accounts of the companies concerned as at 30th June, 1970.

Summarised balance sheets as at 30th June, 1970:

	Indikat Ltd	Syndikat Ltd			
	Rs	Rs.			
Issued equity share capital of Rs 10 each fully paid	3,10,000	3,35,000	Fixed assets	[illegible]	[illegible]
P and L account	1,90,000	15,000	Current assets	[illegible]	[illegible]
Current liabilities	2,00,000	5,50,000			
Rs	7,00,000	9,00,000		[illegible]	[illegible]

Trading profit for the year ending 30-6-67 [illegible]

" " " 30-6-68 [illegible]

" " " 30-6-69 [illegible]

You are required: (1) To calculate [illegible] issued by M/s Sipiem Ltd to the shareholders [illegible]

Syndikat Ltd respectively, stating the ratio in which the shares are allotted by M/s Sipiem Ltd ; (2) To prepare the balance sheet of M/s Sipiem Ltd after the foregoing purchase is completed ; (3) Workings will be considered as a part of your fair answer.

(C.A. Final 1971 ; C.A. Inter., England, 1969, Modified)

[*Goodwill : Indikat Ltd Rs. 81,250 Syndikat Ltd Rs. 68,750 : Balance sheet total Rs. 20,00,000 ; Purchase consideration ; Indikat Ltd Rs. 5,81,250, Syndikat Ltd Rs. 4,18,750 ; Total number of shares allotted 80,000, i.e., Rs. 10,00,000÷12·5 ; Shares allotted : Indikat Ltd Rs. 46,500 ; Syndikat Ltd Rs. 33,500 : Ratio of allotment : Indikat Ltd 3 for 2, i.e., 46,500 for 31,000 ; Syndikat Ltd 1 for 1, i.e., 33,500 for 33,500*]

28. Given below is the balance sheet of Hard Luck Ltd as at March 31, 1969 :

Liabilities	Rs.	*Assets*	Rs.
40,000 Shares of Rs. 10 each fully paid	4,00,000	Land and buildings	3,20,000
Creditors	3,00,000	Plant and machinery	1,30,000
		Stock	70,000
		Debtors	1,20,000
		Cash	500
		Preliminary expenses	5,000
		Profit and loss account	54,500
	Rs. 7,00,000		Rs. 7,00,000

The following scheme of reconstruction was arranged : (1) The company to go into liquidation and a new company with an authorised capital of Rs. 8,00,000 to be formed to take over the assets and liabilities ; (2) Preferential creditors of Rs. 10,000 included in the above balance sheet are to be paid in full ; (3) Unsecured creditors to receive either (*a*) 50 per cent of their claim in cash, or (*b*) 6 per cent debentures in the new company, equivalent to their claims, at par ; (4) Shareholders in Hard Luck Ltd to be allotted one share in the new company of Rs. 10 each, Rs. 5 per share paid for every existing share held by them ; (5) Reconstruction cost amounting to Rs. 6,000 to be paid by Hard Luck Ltd from cash made available by the new company.

Half of the unsecured creditors in value opted out for immediate cash payment for which purpose necessary cash was made available by the new company which made a call of Rs. 5 each on the partly paid shares allotted as aforesaid. The new company valued all assets (except land and buildings) taken over from Hard Luck Ltd at par.

Prepare the balance sheet of the new company after the above transactions are concluded. **(C.A. Final, 1970)**

[*Balance sheet total Rs, 5,45,000 ; Cash in hand Rs. 1,12,000 ; Land and building Rs. 1,13,000 ; Purchase consideration Rs. 4,33,500*]

Note. Value of land and buildings is the balancing figure.

29. Shakti Limited acquired the undertaking of Takti Limited on 31st July 1970. Takti Limited went into liquidation.

The consideration for the acquisition was—

(1) Shakti Limited to assume all the liabilities of Takti Limited ;

(2) Shakti Limited to issue 4 per cent Debenture stock (redeemable at Rs. 105) in satisfaction of each Rs. 100, 5 per cent Debenture of Takti Limited, held outside the company ;

(3) Shakti Limited to allot fully paid Rs. 10 equity shares to Takti Limited as an agreed value of *Rs. 10 25* per share, in the ratio of nine shares of Shakti Limited for five of Takti Limited; *fractions* amounting to 400 shares of Takti Limited were settled in cash provided by Shakti Ltd at the agreed value.

The liquidator of Takti Limited was permitted to retain Rs 7,500 from the assets to meet the cost of liquidation (which amounted to the sum exactly)

The summarised assets and liabilities of Takti Ltd as at 31st July, 1970, were as follows:

Liabilities		Rs.
Share capital—		
2,00,000, Rs. 10 shares, Rs. 7·50 paid		15,00,000
General reserve		7,50,000
Profit and loss account		3,95,000
Leasehold redemption fund		80,000
Plant replacement reserve		1,00,000
5 per cent Debentures		5,00,000
Creditors		1,95,000
		Rs. 35,20,000
Assets		
Freehold premises		91,500
Leasehold premises		2,60,000
Plant	Rs 9,51,900	
Less: depreciation provision	4,63,600	
		4,88,100
Stock		8,73,000
Debtors		9,90,000
Trade investments		90,000
[illegible]		80,000
[illegible]		85,000
Cash at bank		5,62,400
		Rs. 35,20,000

Draft journal entries (including cash items) to close the books of Takti Ltd. (C.A. Final May 1974)

[*Purchase consideration Rs. 41,10,000 : Profit on realisation Rs. 9,45,000*]

30. Babubhai Ltd. had incurred exceptional losses and a scheme of reconstruction was approved by all the interested parties. The Balance Sheet as on 31st December 1975 showed.

Share Capital	Rs.		Rs.
6% Cumulative Preference Shares of Rs. 100 each	4,80,000	Fixed Assets at cost less depreciation	18,00,000
Equity Shares of Rs. 100 each	12,00,000	Stock at cost	7,20,000
Bank Overdraft (Secured)	12,00,000	Trade Debtors	9,60,000
Creditors—Preferential	60,000	Profit and Loss Account	9,00,000
Creditors—Others	14,40,000		
	43,80,000		

The scheme of reconstruction provided :

(*i*) A new company Kishore Ltd. will be formed to take over the assets and liabilities of Babubhai Ltd. as on 31st December 1975.

(*ii*) 2,400 Equity Shares of Rs. 100 each in Kishore Ltd. credited as Rs. 50 per share paid up, to be issed to the liquidators of Babubhai Ltd. for the benefit of that company's equity shareholders who had agreed to pay up the balance of Rs. 50 per share immediately.

(*iii*) 4,800 Preference Shares in Kishore Ltd., credited as Rs. 75 per share paid up, to be issued to liquidators of Babubhai Ltd. for the benefit of that company's preference shareholders, who had agreed to pay the balance of Rs. 25 per share immediately. In addition, Rs. 57,600 in 6% Unsecured Debentures (redeemable after 5 years) to be issued as compensation for arrears of preference dividends.

(*iv*) Kishore Ltd. to reimburse liquidation expenses of Babubhai Ltd. for Rs. 12,000.

(*v*) Kishore Ltd. decided to adopt the following values for tangible assets acquired, *viz.*,

Rs. 16,80,000 for Fixed Assets. Rs. 6.00.000 for Stocks.

Rs. 9,60,000 for Trade Debtors.

(*vi*) Kishore Ltd. immediately to discharge preference creditors in cash.

(*vii*) Liability to other creditors to be fully satisfied as under :

Rs. 7,20,000 in cash.

Rs. 3,60,000 in acceptance of a Bill of Exchange payable after 120 days.

Rs. 3,60,900 in issue of 6% Unsecured Debentures (redeemable after 5 years).

(*viii*) The Authorized Capital of Kishore Ltd. will be Rs. 30,00,000 divided into 15,000 7 per cent Cumulative Preference Shares of Rs. 100 each and 15,000 Equity Shares of Rs. 100 each.

(*ix*) The Directors of Kishore Ltd. have agreed to subscribe for 8,400 Equity Shares of Rs. 100 each payable in full with application.

(*x*) Kishore Ltd. decided to pay off Bank Overdraft Rs. 2,40,000 and the balance to be secured in Fixed Assets.

(*xi*) Preliminary expenses of Kishore Ltd. amount to Rs. 24,000.

Assuming that all the above provisions of the scheme are fulfilled, you are required to show :

(A) In the books of Babubhai Ltd. (*a*) Realization Account and (*b*) Sundry Members' Account, and

(B) (*i*) Journal Entries (including for cash items) in the books of Kishore Ltd., and

(*ii*) Opening Balance Sheet of Kishore Ltd.

(C.A. Final November 1976)

(Loss on realization to Equity holders : Rs. 1,80,000 ; Total of the Opening Balance Sheet : Rs. 32,97,600)

31. Balance sheets of *Z* Ltd and *A* Ltd are given below as at 31st December, 1977 :

Liabilities	*Z Ltd* Rs.	*A Ltd* Rs.	*Assets*	*Z Ltd* Rs.	*A Ltd* Rs.
Share capital (Rs. 10)	2,00,000	4,00,000	Sundry assets	3,10,000	6,00,000
Reserves and surplus	40,000	1,00,000	(no goodwill)		
7% Debentures			Loan to *A* Ltd	30,000	
(Rs. 100)	1,00,000		Investments		
Loan from *Z* Ltd		30,000	5,000 shares in *A* Ltd	50,000	
Other liabilities	50,000	70,000			
Rs.	3,90,000	6,00,000	Rs.	3,90,000	6,00,000

A Ltd takes over *Z* Ltd on the following terms :

(*a*) *A* Ltd will issue sufficient number of shares at Rs. 11 each and pay 50 paise cash per share held by members of *Z* Ltd,

(*b*) 7% Debentures of *Z* Ltd are to be paid at 8% premium by issue of sufficient number of 8% debentures of *A* Ltd at Rs 90.

Show journal entries and significant ledger accounts in the books of both the companies. Also draft balance sheet of *A* Ltd after absorption.

(M. Com., Andhra, June 1978)

[*Purchase consideration Rs. 2,83,000 ; Loss on realisation Rs 15,000 ; Balance sheet total of A Ltd Rs 9,12,000*]

32 The following are the balance sheets of Messrs Hari Ltd and Haran Ltd, as on 31st March, 1975 :

HARI LTD

Liabilities	Rs	*Assets*	Rs.
Share capital—		Goodwill	2,00,000
Shares of Rs. 100 each	10,00,000	Fixed assets	5,00,000
General reserve	2,00,000	Investments (at cost)	2,00,000
Liabilities	3,00,000	Current assets	6,00,000
Rs	15,00,000	Rs.	15,00,000

HARAN LTD

Liabilities	Rs.	*Assets*	
Share capital—		Goodwill	1,00,000
Shares of Rs. 100 each	5,00,000	Fixed assets	[illegible]
General reserve	3,00,000	Investments (at cost)	[illegible]
Development rebate reserve	2,00,000	Current assets	[illegible]
Liabilities	5,00,000		
Rs.	15,00,000	Rs.	[illegible]

It was agreed that Messrs Hari Ltd was to take over [illegible] Haran Ltd, on the basis of their respective share [illegible] whereever necessary, the book value of the assets [illegible] light of further information furnished below :

(*a*) Investments of Haran Ltd, include 1,00[illegible] in Hari Ltd, acquired at a cost of Rs. 150 per [illegible] ments are trade investments in other compa[illegible] of Rs. 77,000.

(*b*) The development rebate reserve was created in 1974. Admissible rate was 20% on the new assets acquired at a cost of Rs. 10,00,000. The company obtained the relief from the Income Tax Department. The company is expected to retain a reserve of at least Rs. 1,50,000.

(*c*) The goodwill of Hari Ltd was considered worth Rs. 3,00,000 and that of Haran Ltd was worth Rs. 1,50,000.

(*d*) The market value of investments of Hari Ltd was Rs. 2,50,000.

(*e*) The current assets of Hari Ltd were worth Rs. 2,80,000.

Suggest a scheme of absorption and make necessary journal entries in the books of Hari Ltd, to record the take-over. Prepare the balance sheet of Messrs Hari Ltd, after the take over.

(C.A. Final, November, 1975)

[*Ratio of exchange 2 : 1 (Hari : Haran); Purchase consideration Rs. 9,27,000*]

33. The following balance sheets are given as on 31st March, 1976 :

(Rs. in lakhs)

	Best Ltd Rs.	*Better Ltd* Rs.		*Best Ltd* Rs.	*Better Ltd* Rs.
Share capital— Shares of Rs. 100 each fully paid	20	10	Fixed assets	25	15
Reserves and surpluses	10	8	Investments	5	
Liabilities	20	2	Current assets	20	5
	Rs. 50	20		Rs. 50	20

The following further information is given :

(*a*) Investments of Best Ltd include Rs. 3 lakhs representing shares in Better Ltd, having a face value of Rs. 2 lakhs.

(*b*) Better Limited issued Bonus shares on 1st April 1976, in the of one share for every two held, out of 'Reserves and Surpluses'.

(*c*) It was agreed that Best Ltd will take over the business of Better Ltd on the basis of the latter's balance sheet, the consideration taking the form of allotment of shares in Best Ltd.

(*d*) The value of the shares in Best Ltd was considered to be Rs. 150 and the shares in Better Ltd were valued at Rs. 100 after the issue of the bonus shares. The allotment of shares is to be made on the basis of these values.

(*e*) Liabilities of Better Ltd included Rs. 1 lakh due to Best Ltd for purchases from it, on which Best Ltd made a profit of 25% on the cost. Rs. 50,000, out of the said purchases, remained in stock on the date of the above balance sheet.

Make the closing ledger entries in the books of Better Ltd, and the opening journal entries in the books of Best Ltd and prepare the balance sheet, as at 1st April 1976, after the takeover. (C.A. Final, May, 1976)

(*Loss on realisation Rs. 3,00,000 ; Purchase consideration Rs. 15,00,000*)

34. *B* Ltd is absorbed by *A* Ltd on 31st December, 1976 on the basis of the following balance sheets :

BALANCE SHEET OF *A* LTD

Liabilities	Rs.	*Assets*	Rs.
Paid-up capital :		Fixed assets :	
2,00,000 equity shares of Rs. 5 each	10,00,000	Factory shed	5,00,000
General reserve	2,50,000	Machinery	3,00,000
Sundry creditors	2,50,000	Furniture	50,000
			8,50,000
		Stock	2,20,000
		Debtors	2,00,000
		Bank balance	60,000
		Investments :	
		500 shares in *B* Ltd	50,000
		Others	70,000
		Debentures in *B* Ltd	50,000
Rs.	15,00,000	Rs.	15,00,000

BALANCE SHEET OF *B* LTD

Liabilities	Rs.	*Assets*	Rs.
Paid-up capital :		Current assets :	
5,000 equity share of Rs. 100 each fully paid	5,00,000	Stock	5,00,000
6% Debentures (Rs 1,000 each)	3,00,000	Debtors	2,50,000
Sundry creditors	3,00,000	Bank balance	30,000
		Investments	
		40,000 shares in *A* Ltd	2,00,000
		Profit and loss account	1,20,000
Rs.	11,00,000	Rs	11,00,000

The following is the scheme of absorption ·

(*i*) Prior to absorption *A* Ltd was to declare a dividend of 25%.

(*ii*) For every share in *B* Ltd 14 fully paid-up equity shares in *A* Ltd were to be issued.

(*iii*) For each debenture in *B* Ltd 10—7½% preference shares of Rs. 100 each of *A* Ltd were to be issued as fully paid.

Directors of *A* Ltd decided to revalue the shares in *B* Ltd according to their intrinsic value just before absorption.

Draw up the balance sheet of *A* Ltd after absorption is completed Show necessary workings (C.A. Inter. May, 1977)

(*Purchase consideration Rs. 1,15,000 , Balance sheet total Rs. 21,80,000*)

35. The share capital of the following cotton mills is as follows .

Jamshedjee Spinning and Weaving Co Ltd 1,00,000 shares of Rs. 100 (Rs 20 paid)

Bharat Cotton Mill Ltd 10,000 shares of Rs 80 (Rs. 60 paid).

Indian Cotton Manufacturing Co Ltd 10,000 shares of Rs. 20 (*fully paid*).

The first named company acquires the others on the following terms :

(*a*) Two of its shares (market value of Rs 25) for the one share of the Bharat Mills plus Rs 20,000 in cash ; (*b*) Rs. 2,40,000 in cash for the business of the Indian Cotton Manufacturing Co Ltd, comprising the following assets only : Building and machinery Rs 1,13,400 ; Stock-in-trade Rs. 46,300 , Book debts (25 per cent bad) Rs. 35,520 ; (*c*) That debts due to the Bharat Mills and the Indian Cotton Manufacturing Co of

Rs. 12,000 and Rs. 4,000 respectively are considered extinguished without payment. Show complete journal entries in the purchasing company's books calculating the cost of the Bharat Mills business on the basis of the market value of the Jamshedji Mills shares 32·22

[*Purchase consideration : Bharat Mills Rs. 5,20,000 ; Indian Cotton Manufacturing Co Rs. 2,40,000*]

36. *A* Ltd and *B* Ltd agree to amalgamate and form a third company *C* Ltd which will take over all the assets and liabilities of the two existing companies.

In the case of *A* Ltd the assets and liabilities are to be taken over at book value for shares in *C* Ltd at the rate of 5 shares in *C* Ltd at a premium of 10 per cent for every 4 shares in *A* Ltd. In the case of *B* Ltd :

(*i*) The debentures of *B* Ltd would be paid off by the issue of an equal number of debentures in *C* Ltd at a discount of 10 per cent ; (*ii*) The holders of 6 per cent preference shares of *B* Ltd would be allotted 4 (four) 7 per cent preference shares in *C* Ltd for every 5 (five) preference shares held in *B* Ltd ; (*iii*) The ordinary shareholders would be allotted sufficient shares to cover the balance on their accounts after adjusting assets values by reducing plant and machinery by 10 per cent and providing 5 per cent on sundry debtors.

The summarised balance sheets of *A* Ltd and *B* Ltd on the date of merger were as follows :

	A Ltd Rs.	*B Ltd* Rs.		*A Ltd* Rs.	*B Ltd* Rs.
Equity shares of Rs. 10 each	4,00,000	5,00,000	Plant and machinery	8,00,000	8,00,000
6% Preference shares of Rs. 100 each	—	3,00,000	Stock	65,000	60,000
4 per cent debentures	—	2,00,000	Sundry debtors	95,000	50,000
Profit and loss account	5,00,000	—	Cash and bank balance	65,000	40,000
Contingency reserve	50,000	—	Profit and loss account	—	1,40,000
Sundry creditors	75,000	90,000			
Rs.	10,25,000	10,90,000	Rs.	10,25,000	10,90,000

Show the entries in the books of *A* Ltd, *B* Ltd and *C* Ltd in respect of the merger. (I.C.W.A., January, 1964)

[*Purchase consideration : A Ltd Rs. 5,50,000 ; B Ltd Rs. 7,77,500 ; Loss on realisation ; A Ltd Rs. 4,00,000, and B Ltd Rs. 2,500*]

37. The *X* Company Ltd is absorbed by *Y* Company Ltd. Given below are the balance sheets of the two companies, taken after revaluation of their assets on a uniform basis :

X COMPANY LIMITED

	Rs.		Rs.
Authorised capital : 9,000 shares of Rs. 300 each	27,00,000	Sundry assets	33,70,000
		Cash in hand	7,000
Paid-up capital : 9,000 Shares of Rs. 270 paid on each	24,30,000		
Creditors	1,10,000		
Reserve fund	8,07,000		
Profit and loss account	30,000		
Rs.	33,77,000	Rs.	33,77,000

Y COMPANY LIMITED

	Rs.		Rs.
Authorised capital :		Sundry assets	87,15,000
40,000 shares of Rs. 180 each	72,00,000	Cash in hand	55,000
Paid-up capital :			
40,000 shares, Rs. 150 paid on each	60,00,000		
Creditors	1,30,000		
Reserve fund	25,70,000		
Profit and loss account	70,000		
	Rs. 87,70,000		Rs. 87,70,000

The holders of every three shares in *X* Company Ltd were to receive five shares in the *Y* Company Ltd plus as much cash as is necessary to adjust the rights of shareholders of both the companies in accordance with the intrinsic values of the shares as per their respective balance sheets. Pass the necessary journal entries in the books of *Y* Company Ltd and prepare the balance sheet giving effect to the above scheme of absorption.

(B Com Madurai, 1972) 32·24

[Purchase consideration Rs 22,77,000 ; Balance sheet total Rs. 1,21,20,000]

38. * With a view to expand business and also effect economies the Bright Light Limited and Sun Light Limited decided to amalgamate and for this purpose the Bright Light Ltd was absorbed by Sun Light Ltd. The assets and liabilities of the two companies are given below :

Bright Light Ltd—Cash Rs 5,000, Investment Rs. 10,000 Reserves Rs. 10,000, Debentures Rs. 60,000 Machinery Rs 70,000, Book debts Rs. 45,000, Creditors Rs. 30,000, Workmen compensation reserve Rs. 10,000, Goodwill Rs. 20,000, Stock Rs 10,000

Sun Light Ltd —Capital Rs 40,000, Investment Rs 10,000, Reserves Rs. 25,000, Debentures Rs. 50,000, Machinery Rs. 60,000, Book debts Rs. 10,000, Creditors Rs 20,000, Workmen compensation fund Rs. 5,000, Stock Rs 5,000, Cash Rs 2,000.

[illegible] of Rs 100 [illegible] d up [illegible] re to be issued such number of new Re 1 shares of Sun Light Ltd at their intrinsic value as would equal the intrinsic value of the Bright Light Ltd shares. *The debtors of Sun Light Ltd include Rs 5,000 due by Bright* [illegible] Rs 5,000 paid up value of shares [illegible] Bright Light Ltd include Rs 2,000 [illegible] ht Ltd invoiced at 10% profit on sale price by the Sun Light Ltd. Give journal entries in the books of Sun Light Ltd and also the balance sheet of Sun Light Ltd after amalgamation.

(C.A , Final May, 1964) 32·25

[Purchase consideration Rs. 63,000]

SUGGESTED READING

1. *Accountancy*—William Pickles
2. *A Modern Approach to Company Accounts*—John Kellock
3. *Modern Advanced Accounting*—Walter Meigs &
4. Lectures on Company Law—Shah
5. ED-22—*Accounting for Business Combinatio*

9

Alteration of Share Capital and Internal Reconstruction

This chapter has been divided into three sections : (*i*) Alteration of share capital ; (*ii*) Internal reconstruction ; and (*iii*) Scheme of internal reconstruction. Strictly speaking, internal reconstruction resulting in reduction of share capital is the part of alteration of share capital but because of legal formalities and accounting complications it has been discussed under a separate section. While section (*ii*) gives "cut and dried" scheme of internal reconstruction, section (*iii*) discusses the techniques of preparing such schemes.

I—ALTERATION OF SHARE CAPITAL

Under this heading it is proposed to deal with only those aspects of alteration of share capital which do not require approval of the court. These have been discussed under Sections 94, 95 and 97 of the Companies Act. Following are some of the alterations which a company can, if authorised by its articles, carry out only by altering the conditions of its memorandum :

(*a*) Increase its share capital by making fresh issue. Accounting entries for the issue of shares have been dealt with in the first chapter.

(*b*) Consolidate its existing shares of smaller amounts into shares of larger amounts. Journal entry for the consolidation is as under :

Debit Share capital (say) Rs. 10 account

Credit Share capital (say) Rs. 100 account

By consolidation, though the amount of share capital remains at the old figure, the number of shares is reduced. This is done when shares are of very small denomination.

(*c*) Sub-divide its share capital of larger amounts into shares of smaller amounts. Entry is :

Debit Share capital (say) Rs. 100 account

Credit Share capital say Rs. 10 account

This is a reverse case of consolidation. Sub division is normally carried out when a company has a share capital of relatively high denomination

(*d*) Decrease its unissued capital (without resulting in the reduction of paid-up capital). It does not need any journal entry. If reduction results in the decrease of paid-up capital then it needs approval of the court. This has been dealt with under the next section "Internal Reconstruction"

(e) Convert its fully paid shares into stock and reconvert its stock into fully paid shares. Journal entry for converting shares into stock is :

Debit Equity share Capital account.

Credit Equity capital stock account

Illustration 153. (Alteration of share capital by sub-division)

A company with a share capital of 20,000 equity shares of Rs. 10 each fully paid carries out by proper resolution a sub-division into shares of Rs. 2 each fully paid. Show journal entry.

Solution.

JOURNAL

		Rs.	Rs.
[illegible]	Dr	2,00,000	
[illegible] shares fully paid as per resolution......dated			2,00,000

Illustration 154. (Alteration by converting share into stock)

A company passed the necessary resolution of converting its 20,000 equity shares of Rs. 10 each fully paid into Rs 2,10,000 stock on the basis of Rs. 105 of stock for every 10 fully paid shares of Rs. 10 each. Show journal entry.

Solution :

JOURNAL

		Rs.	Rs.
Equity share capital	Dr	2,00,000	
Discount on stock	Dr	10,000	
To Equity stock			2,10,000
(Being the conversion of 20,000 fully paid equity shares of Rs. 10 each into Rs. 2,10,000 stock			

2—INTERNAL RECONSTRU[illegible]

Internal reconstruction and capital reduction mean the [illegible] external reconstruction, the existing company has to be liqui[illegible] new company has to be formed This involves many for[illegible] therefore is a tedious affair. Morever, the accumulated [illegible] liquidated company cannot be set off against the profits of [illegible] pany that is formed That deprives the new company [illegible] tant tax advantage Therefore some companies prefer [illegible] recontruction for which there are legal provisions in the [illegible] 1956.

The company can reduce its share capital [illegible] laid down in Secs 100 to 105 of the Companies Act [illegible] of important provisions affecting the accounting [illegible]

(a) Reduction of capital is possible [illegible] special resolution is passed to that effect

(b) Reduction of capital can take any [illegible]

(1) Reducing or extinguishing the [illegible]

(2) Writing off or cancelling paid-up capital which is lost or not represented by avilable assets, or

(3) Paying off paid-up capital which is in excess of the needs of the company.

(c) Reduction of capital can be carried out only after the scheme is confirmed by the court.

(d) The court ordinarily confirms the second type of reduction without consulting the creditors. This is for the simple reason that the creditors' interests are in no way affected by such reduction.

(e) Creditors' interests are affected by the first and third type of reductions. Therefore the court in these cases will confirm only after consulting them. If some creditors are unwilling to give their consent, the company will have to settle their claims.

(f) The court passes the order of confirmation on such terms and conditions as it may think fit only after the consent of the creditors is secured or their claims have been settled. The court may dispense with the consent of a creditor, where the company secures the whole of the debt or the amount fixed by the court.

(g) The court may order the use of words 'and reduced' after the name of the company and also publish reasons for reduction in local papers.

(h) The order of the court has to be filed with the registrar.

(i) Capital reduction may involve the variation of rights of different classes of shares. This can be done only after securing the consent of the holders of at least three-fourths of the shares concerned in separate class meetings by means of special resolution.

(j) Holder of at least one-tenth of the issued share capital affected by variation may apply to the court within 21 days after the consent is obtained or resolution is passed, for the cancellation of such variation. The decision of the court is final.

Accounting Procedure. Under clause (b) above it has already been stated that capital reduction can take place when (i) liability of the members on account of uncalled capital is either reduced or extinguished, (ii) when paid-up capital (which is already lost) is written of, or (iii) when excess capital is returned. Accounting treatment under all the three cases of capital reduction is dealt with as follows :

Case 1. Reducing or extinguishing the liability on account of uncalled capital. When uncalled amount of the share capital is reduced or written off, shareholders benefit inasmuch as they are not required to pay the amount to that extent in future. The security of creditors which extends to the uncalled amount is reduced. Journal entry requiring the cancellation of uncalled liability is as under :

Debit Share capital account (old) *Credit* Share capital account (new)	(in both the cases the paid-up amount is the same)

Illustration 155. *X* Ltd has an issued share capital of 2,00,000 equity shares of Rs. 10 each, Rs. 7 called up. Having complied with the legal formalities under the Companies Act, the company proceeds to extinguish the uncalled liability on its shares. Show journal entry.

JOURNAL OF X LTD

		Rs.	Rs
Share capital account (Rs. 10)	Dr.	14,00,000	
To Share capital account (Rs. 7)			14,00,000

Note : It may be [illegible]
been converted into Rs [illegible]
10 share. It is thus [illegible]
7 shares is created by crediting it.

Case 2. Reducing by returning the excess capital. Owing to declining business, closing of departments or other economic reasons, when a company finds that it has a surplus capital, it may decide to reduce it by returning the surplus part of capital to its members. Since the repayment of capital involves the reduction of creditors' security they object to such a scheme. Therefore, a scheme of capital reduction requiring return of surplus capital is sanctioned only after meeting out their objections. Journal entries are as follows :

1. *Debit* Share capital (total amount of old share capital)
   Credit Share capital (amount to be kept as new capital)
   Credit Sundry members (amount to be returned)
2. *Debit* Sundry members
   Credit Cash (on payment yf money)

Illustration 156. *X* Ltd with a share capital of 1,00,000 equity shares of Rs. 10 each fully paid decides to repay members Rs. 2 per share thus making each share of Rs. 8 fully paid. Journalise the transaction.

Solution :

JOURNAL OF *X* LTD

		Rs.	Rs.
Share capital (Rs. 10)	Dr.	10,00,000	
To Share capital (Rs 8)			8 00,000
To Sundry members			2,00,000
Sundry members	Dr.	2,00,000	
To Bank			2,00,000

Case 3. Reducing the paid-up capital. When a company suffers losses continuously either due to bad investment policy or due to some [illegible] it is often seen that the asset side of its balance sheet shows [illegible]

[illegible] amount of [illegible] tangible [illegible] sheet at more than the reasonable [illegible] company, suffering losses continuo[illegible] a long period, is not represented by the assets. The capital r[illegible] remedy to [illegible] out that

portion of capital which is already lost. This is being carried out by reducing the capital and using it for erasing the losses appearing on the assets side. The accounting entries necessary for carrying out the above objectives are :

Debit Share capital account

Credit Capital reduction account

Capital reduction account is a new account opened for transferring that part of capital which, in the opinion of directors, is not represented by assets. Share capital can be any type of capital: equity capital, preference capital.

If it is thought that losses have reached to such an extent that a portion of borrowed capital was also lost then following entry is necessary:

Debit Debenture account and/or creditors account (as the case may be)

Credit Capital reduction account

This entry can be made only if debentureholders and/or creditors are willing to reduce their claims against the company.

The above entries will have the effect of reducing the share capital and/or borrowed capital and creating one new account called capital reduction account. Now losses can be written off with the help of this new account. The journal entry is :

Debit Capital reduction account

Credit Accumulated losses accounts like discount account, preliminary expense account, debit balance of profit and loss account

Credit Excess portion of assets not written off, *i.e.*, goodwill account, patent rights, trade mark, plant, etc.

Credit Any unrecorded liabilities (if any)

The new balance sheet will show capital and assets at reduced amount. It may be seen that the balance of capital reduction account must be sufficient to write off all accumulated losses and excess portion of assets. This is invariably so because the plan for writing off capital is always prepared keeping in view the quantum of losses. Sometimes, the balance of capital reduction account is more than the total losses to be written off. If this is the situation, the surplus is transferred to capital reserve account. Journal entry for this is :

Debit Capital reduction account

Credit Capital reserve account

The capital reserve account appears in the balance sheet on the liability side under the heading 'reserves and surplus'.

Illustration 157. The balance sheet of *X* Ltd is follows :

Liabilities	Rs.	*Assets*	Rs
Issued share capital :		Goodwill	10,000
10,000 equity shares of Rs 10 each fully paid up	1,00,000	Other fixed assets	90,000
10,000 7% preference shares of Rs. 10 each fully paid up	1,00,000	Stock-in-trade	25,000
		Debtors	30,000
		Profit and loss account	45,000
	Rs. 2,00,000		Rs. 2,00,000

It was resolved that equity shares of Rs. 10 each be reduced to fully paid shares of Rs. 6 each and 7% preference shares of Rs. 10 each be

reduced to 7½% fully paid preference shares of Rs. 7 each. Number of shares in each case remained the same. It was futher resolved that amount so available be used for writing off the debit balances of profit and loss account, goodwill account completely and other fixed assets as far as possible. There were arrears of preference dividend for the last three years and it was decided that they be cancelled. You are required to make journal entries and prepare the revised balance sheet.

Solution.

JOURNAL OF *X* LTD

		Rs.	Rs.
7% Preference share capital	*Dr.*	1,00,000	
To 7½% Preference share capital			70,000
To Capital reduction			30,000
Rs 10 Equity share capital	*Dr.*	1,00,000	
To Rs. 6 Equity share capital			60,000
To Capital reduction			40,000
Capital reduction	*Dr.*	70,000	
To Profit and loss			45,000
To Godwill			10,000
To Fixed assets (balancing figure)			15,000

X LTD (AND REDUCED[1])
BALANCE SHEET
As on..........

Liabilities	Rs.	*Assets*		Rs.
ISSUED SHARE CAPITAL		Other fixed assets	[illegible]	
10,000 Equity shares of Rs. 10 each fully paid, reduced by the order of court to Rs 6 each fully paid	60,000	*Less* Written off by the order of court	15,000	[illegible]
10,000 7% Preference shares of Rs 10 each fully paid reduced by the order of court to 7½% Preference shares of Rs. 7 each fully paid	70,000	Stock in trade		[illegible]
		Debtors		[illegible]
		Goodwill	[illegible]	
		Less Written off by the order of court	[illegible]	NIL
		Profit and loss	45,000	
		Less Written off by the order of court	45,000	NIL
Rs.	1,30,000		Rs	[illegible]

Note : The explanation regarding the reduction of assets and capitals need be given in the balance sheet only when court sanctions it. In the absence of any such order the net amount of assets and capitals (after reduction) be given in the balance sheet.

Illustration 158. The following is the balance sheet of *H Ltd.* as on ...

1. 'And reduced' words are added only when the ... used as a part of name.

Liabilities	Rs.	*Assets*		Rs.
Share capital		Fixed assets		46,700
Authorised, issued and fully paid :		Current assets :		
Equity shares of Rs. 10 each	1,00,000	Stock	81,250	
8% Preference shares of		Debtors	46,750	
Rs. 10 each	40,000	Cash	2,450	
				1,30,450
	1,40,000			
Reserves	45,350			
	1,85,350			
Less Profit and loss account	55,650			
	1,29,700			
7% Debentures	20,000			
Creditors	27,450			
Rs.	1,77,150		Rs.	1,77,150

The company, after the approval of the court, puts the following scheme of reconstruction : (*a*) Each Rs. 10 of debenture is to be exchanged for Rs. 5 of new 9% debentures, one new 10 per cent preference share of Rs. 2·50 and one new equity share of Rs. 2·50 ; (*b*) Each existing preference share is to be reduced to Rs. 3 75, of which Rs. 2 will be represented by new 10% preference shares and Rs. 1·75 by new equity shares ; (*c*) Each existing equity share is to be reduced to Rs. 2·50 and then both preference and equity shares are to be consolidated into shares of Rs. 10 each.

The reduction of capital and reserves are applied for writing off losses and the balance, if any, is used for writing down fixed assets and stock *pro rata*. You are required to : (*a*) give journal entries ; and (*b*) give revised balance sheet. It may be presumed that court has not passed orders for using the words 'and *reduced*' and also does not want the company to show the details of *reduction* in the balance sheet.

Solution :

JOURNAL OF *H* LTD (without narratives)

		Rs.	Rs.
7% Debentures	Dr.	20,000	
To 9% Debentures			10,000
To 10% Preference shares			5,000
To Equity shares (new)			5,000
8% Preference shares	Dr.	40,000	
To 10% Preference shares			8,000
To Equity shares (new)			7,000
To Capital reduction			25,000
Equity shares (Rs. 10)	Dr.	1,00,000	
To Equity shares (Rs. 2·50)			25,000
To Capital reduction			75,000
Capital reduction	Dr.	1,00,000	
Resserves	Dr.	45,350	
To Profit and loss			55,650
To Fixed assets			32,739
To Stock			56,961
10% Preference shares (Rs. 2 50)	Dr.	13,000	
Equity shares (Rs. 2·50)	Dr.	37,000	
To 10% Preference shares (Rs. 10)			13,000
To Equity shares (Rs. 10)			37,000

BALANCE SHEET OF *H* LTD

As on........

	Rs.			Rs.
Share capital		Fixed assets		13,961
Authorised, issued and fully paid :		Current assets :		
10% Preference shares of Rs. 10 each	13,000	Stock	24,289	
Equity shares of Rs 10 each	37,000	Debtors	46,750	
		Cash	2,450	
	50,000			73,489
9% Debentures	10,000			
Creditors	27,450			
Rs.	87,450		Rs	87,450

Illustration 157. Given below is the balance sheet of Be-Kismat Ltd as at December 31, 1966 :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Land and buildings	2,00,000
4,000 Equity shares of Rs 100 each fully paid	4,00,000	Machinery	4,00,000
1,000 Equity 'A' shares of Rs. 100 each Rs 50 per share paid	50,000	Motor vans	40,000
	4,50,000	Furniture	10,000
Development rebate reserve	1,50,000	Investments (market value Rs 40,000)	50,000
Loans (Unsecured)	6,40,000	Stock	1,00,000
Creditors (including Rs. 10,000 holding lien on some assets)	2,60,000	Debtors	1,90,000
		Bank balance	10,000
		Profit and loss account	6,00,000
Rs.	15,00,000	Rs.	15,00,000

The company having turned the corner, a scheme of reconstruction was prepared and approved as under : (1) To bring in the books the present market value of land and buildings which had appreciated by 150% ; (2) Equity shares to be reduced to Rs. 10 per share paid by cancelling Rs. 90 per share, the face value remaining the same at Rs. 100 and the equity shareholders paying a call of Rs 50 per share to provide funds for the company's working ; (3) Unsecured loans to be paid immediately to the extent of Rs. 1,00,000 , (4) Unsecured creditors to be paid immediately to the extent of 10% of their claims and they accepting a remission of 20% of their claims , (5) Development rebate reserve, being no longer required, to be transferred to profit and loss account ; (6) Investments to be brought to their market value ; and (7) the amount available as a result of the scheme to be used to write off the debit balance in profit and loss account

Give journal entries to record the above and give the balance sheet after the reconstruction is effected. *(B. Com., Bombay, 1969)*

Liabilities	Rs.	Assets		Rs.
Share capital		Fixed assets		46,700
Authorised, issued and fully paid :		Current assets :		
Equity shares of Rs. 10 each	1,00,000	Stock	81,250	
8% Preference shares of Rs. 10 each	40,000	Debtors	46,750	
		Cash	2,450	1,30,450
	1,40,000			
Reserves	45,350			
	1,85,350			
Less Profit and loss account	55,650			
	1,29,700			
7% Debentures	20,000			
Creditors	27,450			
Rs.	1,77,150		Rs.	1,77,150

The company, after the approval of the court, puts the following scheme of reconstruction : (*a*) Each Rs. 10 of debenture is to be exchanged for Rs. 5 of new 9% debentures, one new 10 per cent preference share of Rs. 2·50 and one new equity share of Rs. 2·50 ; (*b*) Each existing preference share is to be reduced to Rs. 3 75, of which Rs. 2 will be represented by new 10% preference shares and Rs. 1·75 by new equity shares ; (*c*) Each existing equity share is to be reduced to Rs. 2·50 and then both preference and equity shares are to be consolidated into shares of Rs. 10 each.

The reduction of capital and reserves are applied for writing off losses and the balance, if any, is used for writing down fixed assets and stock *pro rata.* You are required to : (*a*) give journal entries ; and (*b*) give revised balance sheet. It may be presumed that court has not passed orders for using the words 'and reduced' and also does not want the company to show the details of reduction in the balance sheet.

Solution :

JOURNAL OF *H* LTD (without narratives)

		Rs.	Rs.
7% Debentures	Dr.	20,000	
To 9% Debentures			10,000
To 10% Preference shares			5,000
To Equity shares (new)			5,000
8% Preference shares	Dr.	40,000	
To 10% Preference shares			8,000
To Equity shares (new)			7,000
To Capital reduction			25,000
Equity shares (Rs. 10)	Dr.	1,00,000	
To Equity shares (Rs. 2·50)			25,000
To Capital reduction			75,000
Capital reduction	Dr.	1,00,000	
Resserves	Dr.	45,350	
To Profit and loss			55,650
To Fixed assets			32,739
To Stock			56,961
10% Preference shares (Rs. 2 50)	Dr.	13,000	
Equity shares (Rs. 2·50)	Dr.	37,000	
To 10% Preference shares (Rs. 10)			13,000
To Equity shares (Rs. 10)			37,000

BALANCE SHEET OF *H* LTD

As on.........

	Rs			Rs
Share capital		Fixed assets		13,961
Authorised, issued and fully paid :		Current assets :		
10% Preference shares of Rs. 10 each	13,000	Stock	24,289	
Equity shares of Rs 10 each	37,000	Debtors	46,750	
		Cash	2,450	
	50,000			73,489
9% Debentures	10,000			
Creditors	27,450			
Rs.	87,450		Rs	87,450

Illustration 157. Given below is the balance sheet of Be-Kismat Ltd as at December 31, 1966 :

Liabilities	Rs.	*Assets*	Rs.
Share capital		Land and buildings	1,00,000
4,000 Equity shares of Rs 100 each fully paid	4,00,000	Machinery	4,00,000
1,000 Equity 'A' shares of Rs 100 each Rs 50 per share paid	50,000	Motor vans	40,000
		Furniture	10,000
	4,50,000	Investments (market value Rs 40,000)	50,000
Development rebate reserve	1,50,000	Stock	1,00,000
Loans (Unsecured)	6,40,000	Debtors	1,90,000
Creditors (including Rs. 10,000 holding lien on some assets)	2,60,000	Bank balance	10,000
		Profit and loss account	6,00,000
Rs.	15,00,000	Rs.	15,00,000

The company having turned the corner, a scheme of reconstruction was prepared and approved as under : (1) To bring in the books the present market value of land and buildings which had appreciated by 150% ; (2) Equity shares to be reduced to Rs. 10 per share paid by cancelling Rs. 90 per share, the face value remaining the same at Rs. 100 and the equity shareholders paying a call of Rs 50 per share to provide funds for the company's working ; (3) Unsecured loans to be paid immediately to the extent of Rs. 1,00,000 , (4) Unsecured creditors to be paid immediately to the extent of 10% of their claims and they accepting a remission of 20% of their claims ; (5) Development rebate reserve, being no longer required, to be transferred to profit and loss account ; (6) Investments to be brought to their market value ; and (7) the amount available as a result of the scheme to be used to write off the debit balance in profit and loss account

Give journal entries to record the above and give the balance sheet after the reconstruction is effected. (B. Com., Bombay, 1969)

REVISED BALANCE SHEET OF BE-KISMAT LIMITED

As on 31st December 1966

Liabilities	Rs.	*Assets*		Rs.
Authorised share capital :		Fixed assets :		
4,000 equity shares of Rs 100 each	4,00,000	Land and buildings	1,00,000	
1,000 equity 'A' shares of Rs. 100 each	1,00,000	*Add* 150% appreciation	1,50,000	2,50,000
	Rs 5,00,000	Machinery		4,00,000
		Motor vans		40,000
[illegible]		Furniture		10,000
		Investments	50,000	
		Less Reduction due to reconstruction	10,000	40,000
		Current assets, loans and advances :		
		Current assets stock	1,00,000	
		Debtors	1,90,000	
	3,00,000	Bank balance	1,35,000	4,25 000
Reserves and surplus :				
Capital reserve (on reconstruction)	1,40,000			
Unsecured loans :				
Loans unsecured	5,40,000			
Current liabilities and creditors (including Rs 10,000 holding lien on some assets)	1,85,000			
	Rs. 11,65,000			Rs. 11,65,000

CASH ACCOUNT

	Rs.		Rs.
To Balance b/d	Rs. 10,000	By Unsecured loan account	Rs. 1,00,000
To Equity share capital acccount	2,00,000	*By Unsecured creditors account*	25,000
To Equity 'A' share capital account	50,000	By Balance b/d	1,35,000
	Rs 2,60,000		Rs. 2,60,000

Illustration 158. A scheme of capital reduction (approved) on 31 3.1977 of A Co. Ltd., is as follows :

Share Capital :

10,000 equity shares of Rs 100 each, Rs 90 per share paid up. (Amount uncalled on these shares is to be cancelled now and the paid-up value is to be reduced by Rs. 20 per share) 5,000 8% cumulative preference shares of Rs 100 each fully paid-up (These shares are now to be converted into non-cumulative, and in exchange of one share of Rs. 100, nine shares of Rs. 10 are to be given Against their accrued but not declared dividend of Rs 80,000 at the rate of one share per every dividend of Rs. 100, 8% non-cumulative preference shares of Rs. 10 each are to be given.)

Included in the assets are :

Buildings Rs. 2,00,000 (Original cost Rs. 2,50,000 less depreciation fund Rs. 50,000) debit balance of profit and loss account Rs 70,000; good- will Rs. 30,000 and preliminary expenses [illegible] buildings is to be reduced by Rs. 50,000 and

increased by Rs. 10,000. Intangible and fictitious assets are to be written off completely).

Write necessary journal entries in the books of the company to give effect to the above scheme. **(B. Com. Gujarat 1977)**

Solution.

		Rs.	Rs.
Share capital account (Rs. 100)	Dr.	9,00,000	
To Equity share capital account (Rs. 90)			9,00,000
Equity share capital account (Rs. 90)	Dr.	2 00,000	
To Capital reduction account			2,00,000
8% Cumulative preference share capital account	Dr.	5,00,000	
To 8% Non-cumulative preference share capital account			4,50,000
To Capital reduction account			50,000
Capital reduction account	Dr.	8,000	
To 8% Non-cumulative preference share capital account			8,000
Capital reduction account	Dr.	2,42,000	
To Preliminary expenses account			15,000
To Goodwill account			30,000
To Profit and loss account			70,C00
To Building account			50,000
To Depreciation fund account			10,000
To Capital reserve account			67,000

Illustration 159. Depression Ltd decided to reorganise its structure following a period of advese trading conditions. The balance sheet of the company as on 31st December 1969 showed the following :

		Rs.			Rs.
Share Capital :			Fixed Assets :		
Authorised and issued :			Goodwill, at cost		55,000
2,00,000 8% cumulative pref. shares of Re. 1 each		2,00,000	Freehold property at cost		60,000
3,00,000 ordinary shares of Re. 0 50 each		1,50,000	Leasehold property at cost	1,40,000	
Share premium account		5,000	*Less* Depreciation	18,000	1,22,000
9% Debetures (secured on freehold property)	60,000		Plant and machinery at cost	2,20,000	
Add Accrued interest	2,700	62,700	*Less* Depreciation	60,000	1,60,000
					3,97,000
Creditors		85,000	Trade investment, at cost		40,000
Bank overdraft		96,000	Current assets :		
			Stock	30,000	
			Debtors	60,000	90,000
			Preliminary expenses		2.500
			Profit aad loss account		69,200
	Rs.	5,98,700		Rs.	5,98,700

Subsequent to approval by the Court of a scheme for the reduction of capital, the following steps were taken : (*i*) The preference shares were reduced to Re. 0·75 per share, and the ordinary shares to Re. 0 10 per share. After reduction the shares were consolidated into Re 1 shares The authorised capital was restored to 2,00,000 8% cumulative preference shares and 1,50,000 ordinary shares, both of Re. 1 each. (*ii*) 1 new ordinary share of Re. 1 was issued for every Rs 4 of gross preference dividend in arrears. (*iii*) The balance on share premium account was utilised. (*iv*) The debenture-holders took over the freehold property at an agreed figure of Rs. 75,000 and paid the balance to the company after deducting the [illegible] d machinery was written down to Rs [illegible] was sold for Rs, 32,000. (*vii*) Goodwill, [illegible] 8,600, and obsolete stock of Rs. 10,000 were written off. (*viii*) A contingent liability for which no provision had been made was settled at Rs 7,000 and of the amount Rs. 6,300 was recovered from the insurers.

Your are required : (*a*) to show the journal entries necessary to record the above transactions in the company's books, and (*b*) to prepare the balance sheet, after completion of the scheme.

(Adapted from C.A Inter., England, 1970)

Solution :

Depression Ltd

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		Rs.	Rs
8 per cent Cumulative preference share capital account	*Dr.*	50,000	
Ordinary share capital account	*Dr.*	1,20,000	
To Capital reduction account			1,70,000
(25 paise per share written off 2,00,000 8 per cent cumulative preference shares of Re. 1 each and 40 paise per share written off 3,00,000 ordinary shares of Re 0·50 each)			
Capital reduction account	*Dr.*	16,000	
To Ordinary share capital account			16,000
(Issue of 1 new ordinary share of Re. 1 for every Rs. 4 of gross preference dividend in arrears)			
Share premium account	*Dr.*	5,000	
To Capital reduction account			5,000
(Transfer of balance on share premium account)			
9 per cent Debenture account	*Dr.*	62,700	
Cash account	*Dr.*	12 300	
To Freehold property account			60,000
[illegible]			15,000
[illegible]			
Capital reduction account	*Dr.*	20,000	
To Provision for depreciation on plant and machinery			20,000
(Amount required to write plant and machinery down to Rs. 1,40,000 as per capital reduction scheme)			

Cash account	*Dr.*	32,000	
Capital reduction account	*Dr.*	8,000	
To Trade investment account			40,000
(Proceeds of sale of trade investments and transfer of loss to capital reduction account)			
Capital reduction account	*Dr.*	1,45,300	
To Goodwill account			55,000
To Preliminary expenses account			2,500
To Debtors account			8,600
To Stock account			10,000
To Profit and loss account			69,200
(Writing off goodwill, preliminary expenses, debtors, obsolete stock and profit and loss account as per capital reduction scheme)			
Insurance company account	*Dr.*	6,300	
Capital reduction account	*Dr.*	700	
To Creditors account			7,000
(Contingent liability of Rs. 7,000 not provided for, of which Rs. 6,300 is recoverable from insurers)			
Creditors account	*Dr.*	7,000	
To Cash account			7,000
(Settlement of liability)			
Cash account	*Dr.*	6,300	
To Insurance company account			6,300
(Cash received from insurers)			
8 per cent Cumulative preference shares (Re. 0·75)	*Dr.*	1,15,000	
Ordinary shares (Re 0·10)	*Dr.*	30,000	
To 8 per cent Cumulative preference shares (Re. 1)			1,50,000
To Ordinary shares (Re. 1)			30,000
(Consolidation of shares into shares of Re. 1 each)			

BALANCE SHEET (after capital reduction)

As on December 31, 1969

		Rs.
Share capital		
Authorised capital :		
8 per cent cumulative preference shares of Re. 1 each		2,00,000
Ordinary shares of Re. 1 each		1,50,000
Rs.		3,50,000
Issued capital :		
8% Cumulative preference shares		1,50,000
Ordinary shares of Re. 1 each		46,000
Current liabilities :		
Creditors	85,000	
Bank overdraft	52,400	
		1,37,400
Rs		3,33,400

	Cost	Depre.	Rs.
Fixed assets :			
Leasehold Property	1,40,000	18,000	1,22,000
Plant and machinery	2,20,000	80,000	1,40,000
Rs.	3,60,000	98,000	2,62,000
Current Assets : Stock		20,000	
Debtors		51,400	
			71,400
Rs.			3,33,400

WORKINGS

CASH/BANK ACCOUNT

	Rs.		Rs.
To Debenture-holders	12,300	By Balance b/d	96,000
To Trade investment	32,000	By Contingent liability	7,000
To Insurers	6,300		
To Balance c/d	52,400		
Rs.	1,03,000	Rs.	1,03,000

Illustration 162. The balance sheet of *SAD* Limited as at June 30, 1970 was as follows :

		Rs.		Rs.
Share capital—authorised, issued and fully paid :			Freehold land and buildings	34,000
10,000 6% Cumulative preference shares		1,00,000	Plant	96,000
15,000 Ordinary shares of Rs. 10 each		1,50,000	Tools and dies	27,300
		2,50,000	Investments	13,000
Less Profit and loss account—debit balance		98,000	Current assets :	
		1,52,000	Stocks	42,500
7% Debentures	60,000		Debtors	53,400
Interest due	4,200	64,200	Research and development expenditure	18,000
Bank overdraft, secured on freehold land and buildings and plant		20,000		
Creditors		50,000		
	Rs.	2,86,200	Rs.	2,86,200

The scheme of reorganisation detailed below has been agreed by all the interested parties and approved by the Court.

You are required to prepare :

(*a*) the journal entries recording the transactions in the books, including cash ; and (*b*) a balance sheet of the company as at 1st July, 1970 after completion of the scheme.

1. The following assets are to be revalued as shown below : Plant Rs. 59,000, Tools and dies, Rs. 15,000, Stock, Rs. 30,000, and Debtors Rs. 48,700.

2. The research and development expenditure and the balance on profit and loss account are to be written off.

3. Price of land recorded in the books at Rs. 6,000 is valued at Rs. 14,000 and is to be taken over by the debentureholders in part repayment of principal. The remaining freehold land and buildings are to be revalued at Rs. 40,000.

4. A creditor for Rs. 18,000 has agreed to accept a second mortgage debenture of 10% per annum secured on the plant for Rs. 15,500 in settlement of his debt. Other creditors totalling Rs. 10,000 agree to accept a payment of Re. 0·85 in the rupee for immediate settlement.

5. The investments, at a valuation of Rs. 22,000 are to be taken over by the bank.

6. The ascertained loss is to be met by writing down the ordinary shares to Re 1 each and the preference to Rs. 8 00 each. The authorised share capital to be increased immediately to the original amount.

7. The ordinary shareholders agree to subscribe for two new ordinary shares at par for every share held. This cash is all received.

8. The costs of the scheme are Rs. 3,500. These have been paid and are to be written off. The debenture interest has also been paid.

(I.C.W.A. England, 1970

Solution

JOURNAL ENTRIES

		Rs.	Rs.
Ordinary share capital account	Dr.	1,35,000	
Preference share capital account	Dr.	20,000	
To Capital reduction account			1,55,000
(To reduce the value of ordinary share to Re. 1 each and preference share to Rs. 8 each)			
Capital reduction account	Dr.	1,55,000	
Freehold land and buildings account	Dr.	20,000	
Investments account	Dr.	7,000	
Creditors account	Dr.	4,000	
To Plant account			37,000
To Tools and dies account			12,300
To Stock account			12 500
To Debtors account			4,700
To Research and development account			18,000
To Profit and loss account			98,000
To Cost of reorganisation account			3,500
(Revaluation of assets and balances written off in accordance with the terms of the scheme)			
Creditors account	Dr.	15,500	
To 10% Debentures (secured)			15,500
7% Debentures account	Dr.	14,000	
To Freehold land and buildings account			14,000
Cash at bank account	Dr.	22,000	
To Investments account			22,000
(Issue of debentures and transfer of assets to satisfy Liabilities)			
Cash account	Dr.	30,000	
To Ordinary share capital account			30,000
(Issue of 30 000 ordinary shares of Re. 1 each)			
Creditors account	Dr.	8,500	
Debenture interest account	Dr.	4,200	
Cost of reorganisation account	Dr.	3,500	
To Cash account			16,200
(Payment of liabilities and cost of reorganisation)			

BALANCE SHEET OF SAD LIMITED
As on 1st July, 1970
(After completion of the scheme)

		Rs.		Rs.
Authorised capital :			Freehold land and building	40,000
1,50,000 Ordinary shares of Re 1 each		1,50,000	Plant	59,000
12,500 6% Preference shares of Rs 8 each		1,00,000	Tools and dies	15,000
Rs.		2,50,000	*Stock*	30,000
Issued and subscribed capital :			Debtors	48,700
45,000 Ordinary shares of Re. 1 each		45,000	Cash	15,800
10,000 6% Preference shares of Rs 8 each		80,000		
		1,25,000		
Debentures :				
7% first mortgage	46,000			
10% Second mortgage	15,500			
		61,500		
Creditors		22,000		
Rs.		2,08,500	Rs.	2,08,500

Illustration 163. The following is the summarised balance sheet of *AB* Ltd as on 31st *March, 1970 :*

Liabilities		Rs.	*Assets*	Rs.
Authorised and issued capital :			Goodwill	1,20,000
30,000 6 per cent preference shares of Rs 10 each		3,00,000	Land and buildings	2,67,000
6,00,000 *Equity shares of Re.1* each		6,00,000	Plant	2,55,000
		9,00,000	Shares in Subsidiary Ltd (at cost)	75,000
8% Debentures : (Secured on land and buildings)	1,20,000		Stock	2,25,000
Accrued interest	6,000		Debtors	2,70,000
		1,26,000	Profit and loss account	2,64,000
Bank overdraft : (Secured on stock)		1,65,000	Advertisement	60,000
Directors' loan		75,000		
Creditors		2,70,000		
Rs.		15,36,000	Rs.	[illegible]

Notes : (*a*) There is a contingent liability for damages of Rs. [illegible]
(*b*) Preference shares are cumulative and dividends are in [illegible] years.

A capital reduction scheme stating the following [illegible] approved :

(*i*) The preference shares to be reduced to Rs. [illegible] equity shares to 25 paise each and to be [illegible] each and Re. 1 each fully paid respectively. The [illegible]

waive two-thirds of dividend arrear and receive equity shares for the balance. The authorised capital to be restored to Rs. 30,000 preference shares of Rs. 10 each and 6,00,000 equity shares of Re. 1 each. (*ii*) The shares in Subsidiary Ltd are sold to an outside interest for Rs. 1,50,000. (*iii*) All intangible assets are to be eliminated and bad debts of Rs. 12,000 and obsolete stock of Rs. 30,000 to be written off. (*iv*) The debenture-holders to take over one of company's properties (book value Rs. 54,000) at a price of Rs. 60,000, in part satisfaction of the debentures and to provide further cash of Rs. 45,000 on a floating charge. The arrears of interest are paid. (*v*) The contingent liability materialised in the sum stated but the company recovered Rs. 15,000 of these damages in action against one of its directors. This was debited to his loan account of Rs. 24,000, the balance of which was paid in cash on his resignation. (*vi*) The remaining directors agreed to take equity shares in satisfaction of their loans.

You are required to (*i*) give the necessary journal entries including cash transactions ; and (*ii*) set out the revised balance sheet after giving effect to the foregoing entries. **(A.I.C.W.A.)**

Solution.

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		Rs	Rs.
6% Preference share capital account (Rs. 10)	Dr.	3,00,000	
To Capital reduction account			60,000
To 6% Pref share capital account (Rs. 8)			2,40,000
(Being reduction of 30,000 preference shares of Rs. 10 each to equal number of shares of Rs. 8 each)			
6% Preference shares capital account (Rs. 8)	Dr.	2,40,000	
To 6% Preference shares (Rs. 10)			2,40,000
(Being consolidation of 30,000 Rs. 8 preference shares into 24,000 Rs. 10 preference shares)			
Re 1 Equity share capital account	Dr.	6,00,000	
To Re 0·25 equity share capital account			1,50,000
To Capital reduction account			4,50,000
(Being reduction of 6,00,000 equity shares of Re. 1 each to equal number of shares of Re. 0·25 each)			
Re. 0·25 Equity share capital account	Dr	1,50,000	
To Re. 1 Equity share capital account			1,50,000
(Being consolidation of 6,00,000 equity shares of Re. 0·25 each into 1,50,000 equity shares of Re. 1 each)			
Capital reduction account	Dr.	18,000	
To Equity share capital account			18,000
(Being discharge of 1/3 of total arrears of preference dividend (*i.e.*, 1/3×Rs. 54,000) by issuing equity shares of Re. 1 each)			
Bank account	Dr.	1,50,000	
To Shares in subsidiary company			75,000
To Capital reduction account			75,000
(Being the record of sale of investments and transfer of profit on sale of investments to capital reduction account)			

		Rs.	Rs
8% Debentures account To Debenture-holders account (Being transfer of the amount to be paid to debenture-holders account)	Dr.	60,000	 60,000
Debenture-holders account To Properties account To Capital reduction account (Being profit on discharge of liability transferred to capital reduction account)	Dr.	60,000	 54 000 6,000
Bank account To 8% Debentures account (Being issue of further debentures)	Dr.	45,000	 45,000
Accrued interest account To Bank account (Being payment of arrears of interest	Dr.	6,000	 6,000
Directors' loan account To Capital reduction account (Being gain on account of recovery of a claim from the director credited to capital reduction account and debited to his loan account as per instructions)	Dr.	15,000	 15,000
Directors' loan account To Bank account (Being payment of loan due to director on his resignation, *i e*, Total loan 24,000 *Less* Recoveries 15,000 Balance paid Rs. 9,000)	Dr.	9,000	 9,000
Directors' loan account To Equity share capital account (Being issue of equity shares in satisfaction of remaining directors loan, *i e*, Total loan 75,000 *Less* Already cancelled 24,000 To be discharged Rs. 51,000)	Dr.	51,000	 51,000
Capital reduction account To Bank account (Being loss on account of contingent liability debited to capital reduction account)	Dr.	30,000	 30,000
Capital reduction account To Profit and loss account To Advertisements account To Goodwill account To Bad debts account To Stock account (Being accumulated losses and over-valued assets written off)	Dr.	4,86,000	 2,64,000 60,000 1,20,000 12,000 30,000
Capital reduction account To Capital reserve account (Being balance in capital reduction transferred to capital reserve account)	Dr	72,000	 72,000

BALANCE SHEET OF *AB* LTD
As on 31st March, 1970

Liabilities	Rs.	*Assets*	Rs.
Share capital		Fixed assets :	
Authorised:		Land and building	2,13,000
6,00,000 Equity shares of Re. 1 each	6,00,000	Plant	2,55,000
30,000 6% Preference shares of Rs. 10 each	3,00,000	Current assets :	
	Rs. 9,00,000	Stock	1,95,000
Issued and subscribed :		Debtors	2,58,000
2,19,000 *Equity shares of Re. 1* each fully paid	2,19,000	Bank	1,50,000
24,000 6% Preference shares of Rs. 10 each fully paid	2,40,000		
Reserves and surplus :			
Capital reserve	72,000		
Secured loans			
8% Debentures	1,05,000		
Bank overdraft	1,65,000		
Liabilities			
Creditors	2,70,000		
	Rs. 10,71,000		Rs. 10,71,000

***Illustration 164.** The Bubbles Co Ltd is in the hands of a receiver for debenture-holders who hold a charge on all assets, except uncalled capital. The following statement shows the position as regards creditors as on 30th June, 1970 :

Liabilities	Rs.	*Assets*	Rs.
Share capital Rs. 36,00,000 in shares of Rs. 60 each, Rs. 30 paid up	—	Cash in the hand of receiver	27,00,000
First debentures	30,00,000	Property, machinery & plant, etc. at cost Rs. 39,00,000 estimated at	15,00,000
Second debentures	60,00,000	Charged under debentures	42,00,000
Unsecured creditors	45,00,000	Uncalled capital 60,000 shares at Rs 30 each	18,00,000
		Deficiency	75,00,000
	Rs. 1,35,00,000		Rs. 1,35,00,000

A holds the first debentures for Rs. 30,00,000 and second debentures for Rs. 30,00,000. He is also an unsecured creditor for Rs. 9,00,000. *B* holds second debentures for Rs. 30,00,000 and is an unsecured creditor for Rs. 6,00,000.

The following scheme of reconstruction is proposed :

(1) *A* is to cancel Rs. 21,00,000 of the total debt owing to him, to advance Rs. 3,00,000 in cash and to take first debentures (in cancellation of those already issued to him) for Rs. 51,00,000 in satisfaction of all his claims.

(2) *B* is to accept Rs. 9,00,000 in cash in satisfaction of all claims by him.

(3) Unsecured creditors (other than *A* and *B*) are to accept four shares of Rs. 7·50 each fully paid in satisfaction of 75 paise in the rupee of every Rs. 60 of their claims. The balance of 25 paise in the rupee is to be postponed, and to be payable at the end of three years from the date of the court's approval of the scheme. The nominal share capital is to be increased accordingly.

(4) Uncalled capital is to be called up in full and Rs. 52·50 per share cancelled, thus making the shares of Rs. 7·50 each.

Assuming that the scheme is duly approved by all parties interested and by the court, adjust the statement accordingly and show the alterations in the company's balance sheet and give the necessary journal entries.

(C.A. Inter May, 1976)

Solution

Step 1. In order to solve this problem it is necessary to prepare the balance sheet. This will enable us to know the amount of accumulated loss to be written off with the help of capital reduction account. The balance sheet of the company may be drawn as follows :

	Rs		Rs.
Share capital		Property, machinery and plant etc. at cost	39,00,000
60,000 shares of Rs. 60 each Rs. 30 paid	18,00,000	Cash in hand	27,00,000
First debentures	30,00,000	Profit and loss account (balancing figure)	87,00,000
Second debentures	60,00,000		
Unsecured creditors	45,00,000		
	Rs. 1,53,00,000		Rs. 1,53,00,000

Step 2. Find out the balances due to *A*, *B* and other unsecured creditors.

Total amount due to A :	Rs.	*Total amount due to B* :	Rs.	*Unsecured creditors other than A and B*	Rs.
First debentures	30,00,000	Second debentures	30,00,000	Total	45,00,000
Second debentures	30,00,000	Unsecured creditors	6,00,000	*Less* Due to *A* and *B*	15,00,000
Unsecured creditors	9,00,000				
	Rs. 69,00,000		Rs 36,00,000		Rs. 30,00,000

Step 3.

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		Rs.	Rs.
First debentures	Dr	30,00,000	
Second debentures	Dr.	30,00,000	
Unsecured creditors	Dr.	9,00,000	
To *A*			69,00,000
Cash	Dr	3,00,000	
To *A*			3,00,000
A (Rs. 69,00,000+Rs 3,00,000)	Dr.	72,00,000	
To Capital reduction account			21,00,000
To New first debenture account			51,00,000

Second debentures	Dr.	30,00,000	
Unsecured creditors	Dr.	6,00,000	
To Cash account			9,00,000
To Capital reduction account			27,00,000
Unsecured creditors (Rs. 30,00,000−1/4% Rs. 30,00,000)	Dr.	22,50,000*	
To Share capital account			15,00,000
To Capital reduction account			7,50,000
(For every Rs. 60 of the claim 25 paise in a rupee is postponed, *i.e.*, immediately payment is made for Rs. 45. And for every Rs. 45 the payment is made by issuing 4 shares of Rs. 7·50 each, *i.e.*, Rs. 30. Thus for every Rs 45 there is a capital reduction of Rs. 15. Therefore, on Rs. 22,50,000 the capital reduction is Rs. 7,50,000.)			
Bank account	Dr.	18,00,000	
To Share capital account			18,00,000
Share capital account (Rs. 60)	Dr.	36,00,000	
To Share capital account Rs. 7·50)			4,50,000
To Capital reduction account			31,50,000
Capital reduction account	Dr.	87,00,000	
To Profit and loss account			87,00,000

BALANCE SHEET[1]

As on 30th June, 1970

Liabilities	Rs.	*Assets*	Rs.
Share capital		Property, machinery and plant, etc. at cost	39,00,000
Issued and subscribed :		Cash in hand and at bank	39,00,000
2,60,000 shares of Rs. 7 50 each fully paid	19,50,000		
New first debentures	51,00,000		
Unsecured creditors	7,50,000		
Rs.	78,00,000	Rs.	78,00,000

'UTORIAL NOTES

[1] 'And reduced' words have not been added as it has been presumed that court ıs not issued orders for using these words.

* The payment to 1/4 of the unsecured creditors other than *A* and *B* is to be ›stponed, *i.e.*, the payment to them will be made afterwards. Hence this balance ll appear in the new balance sheet.

eorganisation through surrender of shares

So far we have seen examples of shareholders reducing their claim ;ainst the company and thus facilitating the company to carry out ɛduction of capital.' Sometimes this is done in a different way. Under is method shares are sub-divided into shares of smaller denominations d shareholders are made to surrender a part of them to facilitate capital ɔrganisation. Such surrendered shares are usually utilised to reduce or tinguish debenture and trade liabilities. The amount of shares surren-red not re issued, and the claim foregone by debentureholders and :ditors are transferred to capital reorganisation account, which will be lised to write off losses, etc.

ıstration 165. The balance sheet of *A* Ltd as at 31st December, 1966 is follows :

Liabilities	Rs.	*Assets*	Rs.
Authorised and issued capital :		Fixed assets	14,30,000
8,000, shares of Rs. 100 each	8,00,000	Stock-in-trade	80,000
6% Debentures	14,00,000	Debtors	30,000
Accrued interest on the above	70 000	Investments	17,000
Trade creditors	4,50,000	*Cash*	1,03,000
Income-tax due	10,000	Profit and loss account	10,70,000
Rs.	27,30,000	Rs	27,30,000

The following scheme of reorganisation was approved and confirmed by the court :

(1) Each share shall be sub-divided into twenty fully paid equity shares of Rs. 5 each.

(2) After sub-division, each shareholder shall surrender to the company 95% of his holding, for the purpose of re-issue to debenture-holders and creditors so far as required, and otherwise for cancellation.

(3) Of those surrendered 46,000 shares of Rs. 5 each shall be converted into 8% participating preference shares of Rs. 5 each fully paid.

(4) Debentureholders' total claim to be reduced to Rs. 2,30,000. This will be satisfied by the issue to them of 46,000 participating preference shares of Rs. 5 each fully paid.

(5) The liability for income-tax is to be satisfied in full.

(6) The claims of unsecured creditors shall be reduced by 80% and the balance shall be satisfied by allotting them equity shares of Rs. 5 each fully paid from the shares surrendered.

(7) Shares surrendered and not issued shall be cancelled.

Journalise the various entries to be made, assuming that the tax liability is not paid. (B. Com. Bangalore, 1978)

Solution :

		Rs	Rs.
Equity share capital account (Rs. 100) To Equity share capital account (Rs 5)	Dr.	8,00,000	 8,00,000
Equity share capital account To Surrendered shares account	Dr.	7,60,000	 7,60,000
Surrendered shares account To 8% preference share capital account	Dr.	2,30,000	 2,30,000
Surrendered shares account To Equity share capital account	Dr.	90,000	 90,000
Surrendered shares account 6% Debentures account Accrued interest account Sundry creditors account To Capital reduction account	Dr Dr. Dr Dr	4,40,000 14,00,000 70,000 4,50,000	 23,60,000
Capital reduction account To Profit and loss account To Capital reserve	Dr.	23,60,000	 10,70,000 12,90,000

A Ltd

BALANCE SHEET

As on......

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Fixed assets	14,30,000
46,000, preference shares of		Investments	17,000
Rs. 5 each	2,30,000	Current assets :	
26,000 equity shares of		Stock-in-trade	80,000
Rs. 5 each	1,30,000	Debtors	30,000
Reserve and Surplus :		Cash	1,03,000
Capital reserve	12,90,000		
Secured loans	...		
Unsecured loans	...		
Current liabilities and Provisions :			
Income-tax	10,000		
Rs.	16,60,000	Rs.	16,60,000

3—SCHEME OF CAPITAL REDUCTION

In the previous section in all the questions on capital reduction a 'cut and dried' scheme was given to the student and the only thing which he was required to do was to pass journal entries. But sometimes a student is confronted with the problem of suggesting a scheme of capital reduction. The technique has been explained in the following pages:

Basic assumptions. Whenever he takes the job of formulating such a scheme he should keep in mind the following points :

1. The company's present is bad but future is good. Reconstruction without liquidation of a company is like a reconstruction of a house. It is a commonsense that no individual will like to reconstruct the existing structure unless and until the present one has outlived its utility. Besides, the above condition of reconstruction, it is also natural to think that no individual will like to reconstruct even the existing bad structure unless he has the feeling that after reconstruction it will be of some use. If he feels that even after reconstruction it continues to be bad, he will like to keep it as it is or demolish it rather than reconstruct it. Thus, reconstruction of a company takes place only when *'the present is bad but the future is good.'*

2. The scheme shall have the approval of shareholders and creditors. Whenever any scheme of reconstruction is drafted, it is always a basic presumption that such a scheme, unless it violates the basic fundamentals, shall have the approval of the shareholders and creditors as the bright prospect inspire them to accept the scheme of reconstruction.

3. Shareholders and creditors are ready to contribute further money. In all the schemes of reconstruction, it can always be presumed that shareholders or creditors are agreeable to contribute further money for the sake of achieving better prospects lying before the company.

Steps for reconstruction. When reconstruction scheme of a company is drafted it is better to take the following steps : (*a*) Estimate the total loss to be written off ; (*b*) Write off the loss by writing down capitals

both owned and borrowed ; (*c*) Make provisions for compensating those persons who have suffered in the course of capital reduction ; and (*d*) Make provision for the working capital. All these steps have been explained in the following paragraphs.

Step 1. Estimating the loss. The first step in the formulation of capital reduction scheme is to estimate the total loss which a company has suffered to date. This can be estimated by adding the debit balances like profit and loss account, unwritten-off amounts of fictitious assets like discounts on share and debentures, commission on issue of shares and debentures, preliminary expenses, deferred expenses and intangible accounts like goodwill. Sometimes trade mark and patent rights are also not as valuable as they are shown in the balance sheet. Under the scheme of reconstruction they are also brought down to right figures. Since, no directions about these facts are given in the question, the student has to make his own presumptions. Many a time, it is reasonable to go even to the extent of making a presumption that some fixed assets like plant, fixtures, etc., were not properly depreciated by the management in the past and thus a further amount is to be written off those fixed assets at the time of preparing such a scheme.

Step 2 Writing off the loss. The loss so calculated above is to be written off. In order to write off the total loss it is necessary to reduce the capitals contributed by various persons. The following persons suffer the loss in the order they have been written under : (*a*) Equity shareholders ; (*b*) Preference shareholders ; (*c*) Unsecured creditors ; and (*d*) Creditors secured by a floating charge.

Equity shareholders have to suffer the maximum amount of loss. They are asked to suffer to the extent they are *not reduced to nil* because if their contribution is reduced to nil they will not agree to such a scheme. They agree to bear the loss to the maximum amount because they otherwise also know [illegible] value) does not exist. [illegible] the scheme, the natu[illegible] and they will not get any return of capital By agreeing to a scheme of reconstruction they at least hope to get something in future by way of dividend and bonus shares.

If the total amount of loss is so much that it is not covered by the equity share capital then preference shareholders are asked to suffer the loss. They also accept to reduce their capital on the grounds, equity shareholders became ready. If need be, the losses are borne by the unsecured creditors and creditors having a floating charge. It may be remembered that preferential creditors and creditors secured to the extent of realisable value of assets specifically pledged with them be not asked to suffer any loss.

Step 3. Compensating the various parties. It has already been said that the total loss to be written off is divided among various parties depending upon the circumstances. If loss is borne by equity shareholders all alone there is no necessity of compensating them because they will automatically be compensated by better earnings of the company in the future to which they become entitled.

But, where preference shareholders are also asked to suffer some part of loss then they may be compensated by increasing the rate of dividend in such a way that total dividend at the new higher rate on the reduced amount may be almost the same as they were getting on original amount at the existing rate. But this can be done only when the earnings of the company are not fluctuating in nature.

If this method of compensating is a little risky, another method of converting a part of preference share capital into equity capital can be resorted to. This type of conversion gives them an opportunity of exercising voting rights and also compensating their losses by opening the opportunity of getting higher dividends on the converted part.

If creditors or debenture-holders are also asked to suffer some loss they may also be compensated in some form. First usual form of satisfying them is to pay them the rest of the balance in cash. Other way could be to give them some sort of security for the rest of the balance. It may be remembered that in no case they should have priority over the existing arrangement of payment. Higher rate of interest is also one of the remedies in the case of debentures.

Arrears of dividend are often cancelled. The best way of compensating this loss is to give the preference shareholders deposit certificate which can be redeemed when company is in a position to earn sufficient amount needed for redemption.

Step 4. Arranging the working capital. No scheme of capital reduction can be successful unless proper arrangement for a reasonable amount of working capital is made. Working capital is the life-blood of any company without which its survival is impossible. In order to make the provision for working capital any or some of the following methods may be resorted to :

(a) issuing more shares in the market.

(b) reducing the share capital to partly paid-up amount so that rest of the money may be called afterwards. For example, if a share of Rs. 10 each is required to be reduced to Rs. 2 each (Rs. 8 per share is lost) then instead of reducing it to Rs. 2 fully paid-up it may be reduced to Rs. 3 per share Rs. 2 called-up. This will give a scope of asking Re. 1 per share from the shareholders who will agree to subscribe it in the hope of bright future prospects.

(c) requesting debenture-holders to extend loan.

(d) any other short-term loan.

Illustration 166. The following is the balance sheet of *X* Ltd as on 31st March, 1970 :

Liabilities	Rs.	*Assets*	Rs.
Authorised and issued capital :		Net assets	7,60,000
75,000 Equity shares of Rs. 10 each fully paid	7,50,000	Intangible assets	
50,000 6% Preference shares of Rs 10 each fully paid	5,00,000	Goodwill and patent rights	1,60,000
		Profit and loss account	3,30,000
	Rs. 12,50,000		Rs. 12,50,000

Preference dividend is in arrears for the last four years. The net ... 80,000 and all intangible ... annual profits in future are ... ax.) You are required to

Solution. Before suggesting a scheme of capital reduction it has been assumed—

(*a*) The annual profits of Rs. 50,000 are based on pessimistic assumption and these profits are not likely to go down.

(*b*) The future prospects of the company are now really good and shareholders have agreed to suffer losses as they are fully confident of being sufficiently compensated in the future.

(*c*) Preference shareholders have the preference both as to the repayment of capital and dividend.

On the basis of above assumptions the scheme of reconstruction can be drawn in the following manner :

1. *Calculation of loss to be written off* :

	Rs.
Profit and loss account (debit balance)	3,30,000
Goodwill and patent rights	1,60,000
	4,90,000

2. *Reduction of capital.* Since the loss is less than the equity capital, the whole loss can be transferred to their capital accounts. As preference shareholders have the preference both as to the repayment of capital and dividend it is not equitable to ask them to suffer any loss. The loss per share is Rs. 6·54 (*i.e.*, Rs. 4,90,000 ÷ 75,000 shares). Thus each equity share of Rs. 10 may be reduced to Rs. 3·46 paid.

Capital reduction 75,000 × 6·54	Rs. 4,90,500
Less Loss written off	Rs. 4,90,000
Capital reserve	Rs. 500

The arrears of dividend on preference shares may be written off.

3. *Compensation* For the loss suffered, on the cancellation of arrears of dividend, some preference shareholders may be converted into equity share capital so that in time of prosperity higher rate of dividend on them may compensate this loss. Let one-tenth of the preference shares be converted into two equity shares and for this let five equity shares of Rs. 4 fully paid be issued for every preference share of Rs. 10 each. Thus conversion of preference shares will be as follows :

	Rs.	
Total preference shares	5,00,000	
To be converted into equity shares	50,000	
Number of equity shares to be issued	12,500	(of Rs. 4 each)

4. *Management of working capital.* Under step (2) above equity shares were reduced to Rs. 3·46 paid. In order to accumulate working capital, let those shares of Rs. 10 each be reduced to shares of Rs. 4 each, Rs. 3·46 paid. Thus, further Re 0·54 per share be called for arranging working capital. Total fresh cash now available will be Re. 0·54 × 75,000 Rs. 40,500

Now revised balance sheet can be prepared as under :

BALANCE SHEET
of X Ltd (and reduced)
as on 31st March, 1970

	Rs.		Rs.
Authorised and issued capital :		Net assets	7,60,000
75,000 Equity shares of Rs. 4 each fully paid	3,00,000	Cash at bank	40,500
50,000 6% Preference shares of Rs. 10 each fully paid	5,00,000		
Capital reserves	500		
	Rs. 8,00,500		Rs. 8,00,500

It may be noted that there can be various alternative schemes of capital reduction. The above scheme is only a suggestive approach.

Illustration 167. The following is the abridged balance sheet of Hind Ltd as at December 31, 1967 :

	Rs.		Rs.
Paid-up capital :		Goodwill at cost	30,000
10,000 6% cumulative preference shares of Rs 10 each	1,00,000	Net tangible assets	1,52,000
15,000 Equity shares of Rs. 10 each	1,50,000	Profit and loss account	68,000
	Rs. 2,50,000		Rs. 2,50,000

The preference dividend is in arrear for three years. The net tangible assets are estimated to be worth Rs. 1,36,000. On the expectation that the annual profits will be Rs. 15,000 draft a scheme of reconstruction to be submitted to the directors mentioning the important matters which would require consideration and state the effect of such proposal on the two classes of shareholders. Redraft the balance sheet.

(M. Com. Calcutta 1962, 67, 68)

Solution.

(1) The total losses, which the company has suffered and which are required to be written off, are estimated as under :

Goodwill	30,000
Profit and loss account	68,000
Reduction in net tangible assets (assumed)	22,000
Total loss to be written off	Rs. 1,20,000

Since company has been running at a loss and has shown the accumulated losses at Rs 68,000 in the balance sheet, it is quite justified

to assume that goodwill shown in the balance sheet has no value. Besides, company during all these years must have definitely either not at all written off net tangible assets or provided depreciation at lower than the required amount. Therefore, it has been assumed that if fixed assets are reduced by Rs. 22,000 then they will be brought down to their proper values.

(2) The preference shareholders have priority as to the return of capital. They should, therefore, be not asked to suffer any loss. The whole of the loss, therefore, falls on the equity shareholders. Preference shareholders, however, should be asked to waive their arrears of dividend in consideration of the prospects of the immediate resumption of dividends made possible by the reconstruction scheme. Surrender of dividend would involve loss of Rs. 18,000 to the preference shareholders. They should, therefore, be compensated by increasing the rate of dividend to 7% p.a.

(3) Equity shareholders be asked to suffer the loss of Rs. 1,20,000. In other words, each equity share of Rs. 10 be reduced to a share of Rs 2 each. This will write off share capital by Rs. 8 each or Rs. 1,20,000 in all (*i.e.*, 15,000 shares × Rs. 8 per share).

(4) Equity share of Rs. 10 each be reduced to a share of Rs. 4 each, Rs. 2 called up. This will enable the losses written off to the extent of Rs. 8 per share and at the same time leave a scope for the company to make a further call of Rs. [illegible] decided to make a call o[illegible] available in cash which will [illegible]

(5) If the above proposals are accepted then the disposal of the expected future income will be as follows :

		Rs.
Profit (assumed to be after tax)		15,000
Less Transfer to general reserve, $\frac{1}{3}$		5,000
		10,000
Less Preference dividend at 7%		7,000
Profit available for equity shareholders	Rs	3,000
Rate of dividend $\frac{3,000}{30,000} \times 100$		10%

The above plan allows for a very good rate of dividend of 10% to equity shareholders and at the same time leaves sufficient amount for transferring to general reserve which is essential for a company which has just turned the corner Balance sheet after reconstruction is as under :

	Rs.		Rs.
10,000 7% cumulative preference shares of Rs. 10 each fully paid-up	1,00,000	Net tangible assets	1,30,000
15,000 Equity shares of Rs 4 each fully paid-up	60,000	Cash	30,000
	Rs. 1,60,000		Rs. 1,6[illegible]

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'True' or 'False' :

(1) A company can consolidate shares of smaller denomination into shares of larger denomination but cannot sub-divide shares of larger denomination into shares of smaller denomination.

(2) A company is free to reduce or extinguish the uncalled liability of its members.

(3) No permission from the court is required for a company to write off or cancel any paid-up capital which is lost or not represented by available assets.

(4) Cancellation of unissued capital is also a case of capital reduction.

(5) Only unsuccessful companies undertake capital reduction.

(6) Permission of the court is required for a company to return capital which is in excess of the requirements of the company.

II Fill in the blanks :

(1) No journal entry is required for the cancellation of........ share capital.

(2) After granting the scheme of capital reduction the court may order the use of words........ after the name of the company for a specified period.

(3) In a scheme of capital reduction, any new liability to be provided for such as arrears of preference dividend must be met out of........ account.

(4) Consent of the creditors is required if capital reduction involves diminution of liability regarding uncalled capital or return of.........capital.

(5) Consent of the creditors is not required if capital reduction involves the writing off of paid-up capital lost or not represented by.........

III. Indicate the correct answer :

(1) Any balance in the capital reduction account after writing off lost capital is transferred to

(a) Capital reserve

(b) General reserve

(c) Debenture redemption reserve

(2) In a scheme of reorganisation amount of shares surrendered by shareholders is transferred to

(a) Capital reduction account

(b) Shares surrendered account

(c) Capital reorganisation account

(3) Amounts sacrified by shareholders are credited to

(a) Capital reserve account

(b) General reserve account

(c) Capital reduction account

(4) For a company to carry out capital reduction permission is required from

(a) the competent court

(b) Controller of Capital Issues

(c) Company Law Board.

Problems

1. Sanjog Company Limited passed necessary resolution and received sanction of the court for the reduction of its share capital by Rs. 2,50,000 for the purposes enumerated here under :

(a) to write off the debit balance of profit and loss account Rs. 1,05,000 ;

(b) to reduce the value of plant and machinery by Rs. 45,000 and of goodwill by Rs. 20,000 ; and

(c) to reduce the value of investments to market value by writing off Rs. 40,000.

The reduction was made by converting 25,000 preference shares of Rs. 20 each fully paid to the same number of preference shares of Rs. 15 each fully paid and by converting 25,000 ordinary shares of Rs. 20 each Rs. 15 paid-up into 25,000 ordinary shares of Rs. 10 each fully paid.

Show journal entries necessary in relation to the reduction of share capital and show how you would deal with the balance of the capital reduction account. (B. Com. Bombay, 1977)

(Balance in capital reduction account transferred to capital reserve Rs 40,000)

2. The share capital of Zed Ltd consisted of the following .

(i) 10,000 6% Preference shares of Rs 100 each ; and

(ii) 50,000 Equity shares of Rs. 10 each.

The shares were fully paid. By the end of 1966 it had accumulated losses to the extent of Rs. 3,50,000 besides preliminary expenses totalling Rs. 20,000. It was also ascertained that the fixed assets which stood in the books at Rs. 14,00,000 were overvalued to the extent of Rs 4,00,000.

A scheme of capital reduction was adopted and approved by the Court in order to remove the overvaluation and to write off the losses and [illegible] ference shares were [illegible]) each and the equity [illegible] Also the dividends on the preference shares which were in arrear for three years were to be cancelled.

State the Journal entries to be passed on the implementation of the scheme. [B. Com. (Hons.) Delhi, 1969]

[Total capital reduction Rs. 8,00,000 ; Capital reduction account transferred to capital reserve account Rs. 30,000]

3. A public limited company passed the necessary resolution and received sanction of the court for the reduction of its share capital by Rs. 5,00,000 for the purposes enumerated hereunder : (a) To write off the debit balance of profit and loss account Rs. 2,10,000. (b) To reduce the

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'True' or 'False' :

(1) A company can consolidate shares of smaller denomination into shares of larger denomination but cannot sub-divide shares of larger denomination into shares of smaller denomination.

(2) A company is free to reduce or extinguish the uncalled liabilit of its members.

(3) No permission from the court is required for a company to write off or cancel any paid-up capital which is lost or not represented by available assets.

(4) Cancellation of unissued capital is also a case of capital reduction.

(5) Only unsuccessful companies undertake capital reduction.

(6) Permission of the court is required for a company to return capital which is in excess of the requirements of the company.

II Fill in the blanks :

(1) No journal entry is required for the cancellation of........ share capital.

(2) After granting the scheme of capital reduction the court may order the use of words........ after the name of the company for a specified period.

(3) In a scheme of capital reduction, any new liability to be provided for such as arrears of preference dividend must be met out of......... account.

(4) Consent of the creditors is required if capital reduction involves diminution of liability regarding uncalled capital or return of.........capital.

(5) Consent of the creditors is not required if capital reduction involves the writing off of paid-up capital lost or not represented by.........

III. Indicate the correct answer :

(1) Any balance in the capital reduction account after writing off lost capital is transferred to

(a) Capital reserve

(b) General reserve

(c) Debenture redemption reserve

(2) In a scheme of reorganisation amount of shares surrendered by shareholders is transferred to

(a) Capital reduction account

(b) Shares surrendered account

(c) Capital reorganisation account

(3) Amounts sacrified by shareholders are credited to

(a) Capital reserve account

(b) General reserve account

(c) Capital reduction account

(4) For a company to carry out capital reduction permission is required from

(a) the competent court

(b) Controller of Capital Issues

(c) Company Law Board.

Problems

1. Sanjog Company Limited passed necessary resolution and received sanction of the court for the reduction of its share capital by Rs. 2,50,000 for the purposes enumerated here under :

(a) to write off the debit balance of profit and loss account Rs. 1,05,000 ;

(b) to reduce the value of plant and machinery by Rs. 45,000 and of goodwill by Rs. 20,000 ; and

(c) to reduce the value of investments to market value by writing off Rs. 40,000.

The reduction was made by converting 25,000 preference shares of Rs. 20 each fully paid to the same number of preference shares of Rs. 15 each fully paid and by converting 25,000 ordinary shares of Rs. 20 each Rs. 15 paid-up into 25,000 ordinary shares of Rs. 10 each fully paid.

Show journal entries necessary in relation to the reduction of share capital and show how you would deal with the balance of the capital eduction account. (B Com. Bombay, 1977)

(Balance in capital reduction account transferred to capital reserve Rs 40,000)

2. The share capital of Zed Ltd consisted of the following :

(i) 10,000 6% Preference shares of Rs 100 each ; and

(ii) 50,000 Equity shares of Rs. 10 each.

The shares were fully paid. By the end of 1966 it had accumulated losses to the extent of Rs. 3,50,000 besides preliminary expenses totalling Rs. 20,000. It was also ascertained that the fixed assets which stood in the books at Rs. 14,00,000 were overvalued to the extent of Rs. 4,00,000.

A scheme of capital reduction was adopted and approved by the Court in order to remove the overvaluation and to write off the losses and preliminary expenses. Under the scheme the 6% preference shares were to be converted into 7½% preference shares of Rs. 60 each and the equity shares were to be converted into shares of Rs. 2 each. Also the dividends on the preference shares which were in arrear for three years were to be cancelled.

State the Journal entries to be passed on the implementation of the scheme. [B. Com. (Hons.) Delhi, 1969]

[Total capital reduction Rs. 8,00,000 ; Capital reduction account transferred to capital reserve account Rs. 30,000]

3. A public limited company passed the necessary resolution and received sanction of the court for the reduction of its share capital by Rs. 5,00,000 for the purposes enumerated hereunder : (a) To write off the debit balance of profit and loss account Rs. 2,10,000. (b) To reduce the

value of plant and machinery by Rs. 90,000 and of goodwill by Rs. 40,000. (c) To reduce the value of investments to market value by writing off Rs. 80,000.

The reduction was made by converting 50,000 preference shares of Rs. 20 each fully paid to the same number of preference shares of Rs. 15 each fully paid, and by converting 50,000 ordinary shares of Rs. 20 each, Rs. 15 paid-up into 50,000 ordinary shares of Rs. 10 each fully paid. Give journal entries necessary in relation to the reduction of share capital and show how you would deal with the balance of the reduction of share capital account. **(B. Com. Andhra 1967)**

[*Total capital reduction Rs. 5,00,000 ; Capital reduction account transferred to capital reserve account Rs. 80,000*]

4. The following was the balance sheet of Tin Toys Ltd as on 31st December 1960 :

Liabilities		Rs.	*Assets*	Rs.
Authorised Capital :			Goodwill	10,000
20,000 Ordinary shares of Rs. 10 each		2,00,000	Buildings	20,500
			Machinery	50,850
Issued, subscribed and paid-up :			Preliminary expenses	1,500
12,000 shares of Rs. 10 each	1,20,000		Stock	10,275
Less calls in arrear (Rs. 3 per share) on 3,000 shares	9,000		Book debts	15,000
		1,11,000	Cash at bank	1,500
Sundry creditors		15,425	Profit and loss account	20,800
Provision for taxes		4,000		
	Rs.	1,30,425	Rs.	1,30,425

The directors find that the machinery is overvalued by Rs. 10,000. It is now proposed to write down this asset to its true value and extinguish Goodwill account, profit and loss and preliminary expenses account by adopting the following scheme : (*a*) Forfeit the shares on which the calls are outstanding (*b*) Reduce the paid-up capital by Rs. 3 per share. (*c*) Reissue the forfeited shares at Rs. 5 per share. (*d*) Utilise the provision for taxes, if necessary.

Draft the journal entries necessary for giving effect to the above scheme and prepare the reconstructed balance sheet of the company. **(B. Com., Andhra, 1968 ; B. Com., Madurai, 1972)**

[*Total Capital reduction Rs. 42,300 ; Balance sheet total Rs. 1,03,125*]

5. The following is the balance sheet of United Industries Ltd on 31st December 1968 :

Liabilities	Rs	*Assets*	Rs.
Authorised capital :		Patents	8,50,000
10,000 Preference shares of Rs. 100 each	10,00,000	Leasehold premises	1,30,800
10,000 Ordinary shares of Rs. 100 each	10,00,000	Machinery	42,200
		Sundry debtors	76,500
Rs.	20,00,000	Stock in trade	55,000
		Discount on issue of shares	18,000
		Preliminary expenses	12,000
		Profit and loss account	1,15,000

Subscribed capital:		Cash in hand	500
7,500 Preference shares of Rs 100 each fully paid	7,50,000		
5,000 Ordinary shares of Rs. 100 each, fully paid	5,00,000		
Sundry creditors	30,000		
Bank overdraft	20,000		
Rs.	13,00,000	Rs.	13,00,000

The company suffered huge losses and was not getting on well.

The following scheme of reconstruction was adopted : (*a*) The preference shares be reduced to an equal number of fully paid shares of Rs. 50 each (*b*) The ordinary shares be reduced to an equal number of shares of Rs. 25 each The amount available be used to write off Rs. 30,800 off the leasehold premises, Rs. 15,000 off stock, 20% off machinery and sundry debtors, and the balance available (after writing off discount on issue of shares, preliminary expenses and profit and loss accounts completely) off patents.

Journalise the transactions and perpare the balance sheet after reconstruction has been carried out **(B. Com. Marthwada, 1969)**

(Total capital reduction Rs 7,50,000 ; Patents written off by Rs. 5,35,460) Balance sheet total Rs. 5,50,000)

6 The balance sheet of Nipun Limited on 31st March, 1978 was as follows :

Liabilities	Rs.	*Assets*	Rs.
8% Preference share capital (Each share of Rs. 10)	50 000	Goodwill	90,000
Equity share capital (Each share of Rs. 10)	2,50,000	Land and buildings	1,40,000
General reserve	20,000	Machinery	37,500
6% Debentures (of Rs. 100 each)	20,000	Furniture	15,000
Bank overdraft	28,500	Preliminary expenses	1,000
Creditors	40,000	Profit and loss account	1,25,000
Rs.	4,08,500	Rs.	4,08,500

The capital reduction scheme, approved by the court is as under :

(1) Holders of 6% debentures of Rs. 100 are to be given 8% debentures of Rs. 50 and preference shares of Rs. 10 each, of equal amount, for the remaining amount of Rs 50.

(2) The value of all the preference shares including the preference shares given to debentureholders as shown above, is to be reduced to Rs. 6 and dividend rate is to be increased up to 9%.

(3) The value of equity shares is to be reduced to Rs. 2.

(4) The existing equity shareholders are to purchase additional equity shares of Rs 1,00,000 for cash, to pay off the bank overdraft.

(5) All fictitious assets are to be written off.

furniture are to be written off in proportion of their book values, with the help of general reserve and capital reduction account.

Pass necessary journal entries in the books of the company, to record the above transactions. Prepare the company's balance sheet after such changes.

(B. Com. Gujarat 1978)

(*Balance-sheet total Rs. 2,36,000*)

7. The following is the balance sheet of Poona Estates Ltd. as on 31st December 1966 :

BALANCE SHEET

As at 31-12-1966

Liabilities		Rs.	*Assets*	Rs.
Share capital			Fixed assets :	
Authorised :			Poona property	1,60,000
30,000 equity shares of Rs. 10 each		3,00,000	Bombay property	1,20,000
30,000 7% Pref. shares of Rs. 10 each		3,00,000	Plant and machinery	1,50,000
Subscribed, issued and paid up :			Investments :	
20,000 equity shares of Rs. 10 each fully paid		2,00,000	6% Government loan (earmarked against workmen's Comp fund)	30,000
18,000 7% Pref. shares of Rs 10 fully paid		1,80,000	Miscellaneous expenditure and losses :	
Reserves and surplus :			Profit and loss account	40,000
Workmen's compensation fund—				
Poona	20,000			
Bombay	10,000	30,000		
Secured loans :				
6% 'A' debentures secured on Poona property	30,000			
6% 'B' debentures secured on Bombay property	35,000	65,000		
Current liabilities and provisions :				
Sundry creditors		25,000		
		Rs. 5,00,000		Rs. 5,00,000

The following scheme of reconstruction was duly approved :

1. Equity shares were to be reduced to Re. 1 each.
2. Preference shares were to be reduced by Rs. 2 per share.
3. Debentureholders were to forego their unpaid interest Rs. 5,200 which is included in sundry creditors.
4. 'B' Debentureholders agreed to take over the Bombay property at Rs. 50,000 and paid the balance amount due from them in cash.
5. Workmen's compensation fund (Bombay) disclosed the fact that actually there was a liability of Rs. 2,000 only. As a result the relevant fund account balance was to be brought down to the required amount. Investments were realised at 10% above the book value
6. The plant and machinery were to be written down by Rs. 90,000.
7. Any balance remaining was to be applied as to 75% in writing down the poona property and 25% transferred to capital reserve.

Pass the necessary journal entries in the books of the company and prepare a balance sheet as on 1st January 1967 after giving effect to the above reconstruction scheme. (B. Com. Poona 1968)

(Capital reserve Rs. 7,500 ; Capital reduction Rs. 2,30,000 ; Balance sheet total Rs. 2,43,300 ; Cash Rs. 23,800; Creditors Rs. 19,800)

[Hint : Investments of Rs. 8,000 have been sold for Rs. 8,800. Cash is made of cash received from the debentureholders and cash from sale of investments]

8. The following was the balance sheet of R Ltd as on June 30, 1970 :

Liabilities	Rs.	*Assets*	Rs.
Authorised capital :		Goodwill	30,000
1,000 6% Cumulative preference shares of Rs 100 each	1,00,000	Land and buildings	60,000
2,000 ordinary shares of Rs. 100 each	2,00,000	Plant and machinery	55,000
	Rs. 3,00,000	Motor vehicles	6,500
Issued capital :		Stock	52,600
800 Preference shares fully paid	80,000	Sundry debtors	9,200
1,200 Ordinary shares fully paid	1,20,000	Cash in hand	150
5% Debentures	50,000	Profit and loss account	73,000
Sundry creditors	9,100		
Bank overdraft	27,350		
	Rs. 2,86,450		Rs. 2,86,450

No preference dividend has been paid for eight years and the company is handicapped by the antiquated nature of its plant. In the opinion of the directors, if new capital were available and modern plant acquired substantial profits could be earned. Accordingly they proposed a capital reduction scheme as follows :

(*i*) Each existing ordinary share to be reduced to Rs. 5 each.

(*ii*) All arrears of preference dividend to be cancelled.

(*iii*) Each existing preference share to be reduced to Rs. 75 and then exchanged for one new 6% cumulative preference share of Rs. 50 each and five ordinary shares of Rs. 5 each.

(*iv*) The credit balance resulting from the above to be applied in eliminating the debit [illegible] down plant and machinery [illegible]

(*v*) The unissu[illegible] to shares of Rs. 50 and Rs. 5 each respectively and the authorised capital to be restored to Rs. 3,00,000 by the creation of sufficient new ordinary shares.

(*vi*) *All the debentures to be redeemed at 105 per cent, holders* being given the option to subscribe at par for new 4% debentures.

Sanction of the court to the scheme having been obtained, Rs. 40,000 new ordinary shares were issued at par, payable in full on application. [illegible]

The total expenses incurred by the company in connection with the scheme, excluding underwriting commission, amounted to Rs. 1,350.

You are required to show the journal entries necessary to record only the reduction scheme and to set out the company's balance sheet after the above arrangements had been carried out. **(M. Com. 1971, Raj. Uni.)**

(Capital reduction Rs. 1,34,000 ; Goodwill reduced by Rs. 20,150 ; Cash balance Rs. 6,300 ; Balance sheet total Rs. 1,63,450)

[Hints : (*i*) Premium on redemption of debentures Rs. 2,500 ; commission on issue of shares Rs. 1,000 ; reconstruction expenses Rs 1,350 are written off the capital reduction account and the balance has been used for reducing goodwill account.

(*ii*) 4% debentures of Rs. 21,000 issued to redeem debentures of Rs. 20,000 at 5% premium.]

9. On January 1, 1968 the balance sheet of Wisemen Ltd was as under :

Liabilities		Rs.	*Assets*		Rs.
Share capital authorised, issued and paid-up :			Bombay Works		20,00,000
4,00,000 ordinary shares of Rs. 5 each, fully paid		20,00,000	Calcutta Works		10,00,000
3,00,000 6% preference shares of Rs. 5 each fully paid		15,00,000	Workmen's compensation fund investment		35,000
'A', 6% debentures secured on Bombay Works		1,00,000	Stock		1,15,000
'B', 6% debentures secured on Calcutta Works		2,50,000	Debtors		50,000
Workmen's compensation fund :			Discount on debentures :		
Bombay	25,000		'A'	2,500	
Calcutta	10,000	35,000	'B'	10,000	12,500
Bank overdraft		7,50,000	Profit and loss account		16,22,500
Creditors		2,00,000			
		Rs. 48,35,000			Rs. 48,35,000

As on January 1, 1968, under a scheme to reduce the capital : (*a*) the ordinary shares were reduced to 25 paise each ; (*b*) the preference shares were reduced to Rs. 3·75 each and the rate of dividend on them to 5% ; (*c*) the '*A*' and '*B*' debentureholders waived payment of Rs. 42,000 interest (which was included in "creditors, Rs. 2,00,000") ; (*d*) the directors were to refund Rs. 50,000 fees they had received.

The "*B*" debentureholders formed a new company to take over the Calcutta Works for Rs. 5,00,000 and this price was satisfied on the same date by the surrender of the '*B*' debentures and the allotment of 50,000 fully paid shares of Rs. 5 each in the new company.

The investments were valued at Rs. 25,000 stock at Rs. 50,000 and the debtors at Rs. 40,000. There was no actual liability to workmen in Calcutta Works. The assets were to be written down accordingly ; any fictitious assets were to be eliminated ; only necessary reserves were to be retained and balance available was to be written off the book value of the Bombay Works.

Journalise these transactions.

(Total capital reduction Rs. 23,77,000 ; Bombay Works written off by Rs. 1,57,000)

10. The balance sheet of The Vijay Co Ltd as on 31-12-75 is as follows :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Patents	8,50,000
7,500 6% preference shares of Rs. 100 each fully paid-up	7,50,000	Leasehold premises	1,30,800
5,000 ordinary shares of Rs. 100 each, fully paid-up	5,00,000	Plant and machinery	42,200
Sundry creditors	30,000	Sundry debtors	76,500
Bank overdraft	20,000	Stock-in-trade	55,000
		Share discount account	18,000
		Preliminary expenses	12,000
		Profit and loss account	1,15,000
		Cash balance	500
Rs.	13,00,000	Rs.	13,00,000

The company adopted a scheme of reconstruction because of heavy losses. The following was Capital Reduction Fund Account created by reconstruction scheme :

CAPITAL REDUCTION FUND ACCOUNT

	Rs.		Rs.
To Profit and loss account	1,15,000	By 6% preference share capital account	3,75,000
To Preliminary expenses account	12,000	*By Ordinary share capital account*	3,75,000
To Share discount account	*18,000*		
To Leasehold premises account	30,800		
To Plant and machinery account	8,440		
To Stock-in-trade account	15,000		
To Bad debts reserve account	15,300		
To Patents account	5,00,000		
To Capital reserve account	35,460		
Rs.	7,50,000	Rs.	7,50,000

Prepare the balance sheet of Vijav Co Ltd after capital reduction.

(B. Com., Gujarat 1976)

(Balance sheet total Rs. 5,85,460)

11. The summarised balance sheet of Enterprisers Ltd as on March 31, 1966 was as follows :

Liabilities		Rs	*Assets*		Rs.
Share capital :			Fixed assets :		
Authorised, issued and fully paid :			Freehold property		8,50,000
80,000 6 per cent cum *preference shares of* Rs. 10 each	8,00,000		Plant		1,00,000
1,50,000 Equity shares of Rs 10 each	15,00,000	23,00,000	Patents		75,000
Secured loan :			Goodwill		2,60,000
6 per cent debentures (secured on freehold property)	7,50,000		Trade investments at cost		1,10,000
Accrued interest	45,000	7,95,000	Current assets :		
Unsecured loan :			Debtors	9,70,000	
Directors	2,00,000		Stock	8,50,000	
Overdrafts	3,90,000	5,90,000	Deferred advertising	2,00,000	20,20,000
Current liabilities :			Profit and loss account		8,70,000
Creditors		6,00,000			
		Rs. 42,85,000			Rs. 42,85,000

Notes : (1) The preference share dividends are four years in arrears.
(2) There are capital commitments totalling Rs. 5,00,000.

The court approved a scheme of reorganisation, submitted by the debentureholders and agreed to by other interested parties, to take effect on 1st April, 1966, whereby :

(*i*) The preference shares to be written down to Rs. 7·50 each and the equity shares to Rs. 2 each, each class of share then to be converted into shares of Rs. 10 each. (*ii*) Of the preference dividends in arrears, three-fourths to be waived and equity shares to be allotted at par for the remaining one-fourth. (*iii*) The debentureholders to have their accrued interest paid in cash to take over freehold property (book value Rs. 2,00,000) at a valuation of Rs. 2,40,000, in part repayment of their holdings and provide additional cash of Rs. 2,60,000 secured by a floating charge on the company's assets at an interest rate of 8 per cent per annum. (*iv*) Patents, goodwill and deferred advertising to be written off, Rs. 1,30,000 to be written off stock, Rs. 1,37,000 to be provided for bad debts and the remaining freehold property to be revalued at Rs. 7,75,000. (*v*) The trade investments to be sold for Rs. 2,80,000. (*vi*) The directors accept settlement of their loans as to 90 per cent thereof by allotment of equity shares at par and as to 5 per cent in cash, the balance 5 per cent being waived. (*vii*) The contracts for capital expenditure to be called on payment of 5 per cent of the contract price as a penalty.

You are required to—(*a*) show journal entries giving effect to the above arrangements (including cash transactions), and (*b*) prepare balance sheet of Enterprisers Ltd after completion of the scheme.

(I.C.W.A. July, 1967) 32·28
(*Balance sheet total Rs. 28,88,000*)

12. The following balances were extracted from the books of ANANT LTD as on 31-3-1978 :

Preliminary expenses	Rs. 32,000	Debenture interest outstanding	Rs. 3,000
Patents	22,000	Property (at cost)	1,10,000
Share premium	50,000	Depreciation thereon	20,000
Goodwill	17,000	Stock (31-3-1978)	15,000
Profit and loss account (debit balance)	85,800	Machinery (at cost)	2,20,000
6% Debentures	50,000	Depreciation thereon	40,000
Creditors	20,000	Debtors	31,200

Share capital :

1,500 8% cumulative preference shares of Rs. 100 each Rs. 1,50,000; 2,000 equity shares of Rs. 100 each Rs. 2,00,000.

The following scheme of capital reduction was duly sanctioned by the court :

(1) Equity shares to be reduced by Rs. 90 each.

(2) Preference shares to be reduced to Rs. 90 each.

(3) The debentureholders to waive their right over outstanding interest.

(4) One new equity share paid-up to the extent of 50% only to be issued for each Rs. 100 of gross preference dividend, which has not been declared since April, 1976.

(5) All credit balances not being the outside liabilities and all debit balances not being the amounts receivable as well as the intangible assets are to be written off.

(6) Any balance available is to be utilised in writing down the fixed assets in proportion to their written down values.

You are required to give journal entries, and balance sheet after the reduction. (B. Com., Saurashtra 1978)

(Balance sheet total Rs. 2,44,200)

*13. The receiver for debentureholders who had a charge on all assets presented the following statements relating to *ABC* Co Ltd from the creditors' point of view as on December 31, 1966 :

Liabilities	Rs	*Assets*	Rs.
Nominal capital :		Cash in the hands of the	
1,50,000 shares of Rs. 50 each	75,00,000	receiver	80,00,000
		Property, machinery and	
Issued, subscribed capital :		plant, etc.	30,00,000
1,00,000 shares of Rs. 50 each	50,00,000	(Cost Rs. 80,00,000)	
Called-up and paid-up capital :			1,10,00,000
1,00,000 shares of Rs. 50 each,		Uncalled capital :	
Rs. 25 per share called-up	—	1,00,000 shares at Rs. 25 each	25,00,000
First debentures	40,00,000	Deficiency	75,00,000
Second debentures	80,00,000		
Unsecured creditors	90,00,000		
Rs.	2,10,00,000	Rs.	2,10,00,000

X holds the first debentures for Rs. 40,00,000 and second debentures for Rs. 40,00,000. He is an unsecured creditor for Rs. 20,00,000.

Y holds second debentures for Rs. 40,00,000 and is an unsecured creditor for Rs. 25,00,000.

The following scheme of reconstruction is proposed : (*a*) *X* is to advance Rs. 17,50,000 in cash and is to accept new first debentures (those already held by him being surrendered and cancelled) for Rs. [illegible] in full satisfaction of all his claims against the company. (*b*) [illegible] accept Rs. 50,00,000 in cash in satisfaction of all claims to him [illegible] secured creditors other than *X* and *Y* are to accept 3 shares of Rs. 5 [illegible] fully paid in full satisfaction of 50 paise in the rupee of [illegible] their claims. The balance of 50 paise in the rupee is to be [illegible] and is to be payable at the end of one year from the date of [illegible] approval of the scheme (*d*) Uncalled capital is to be called [illegible] the shares are to be subdivided into shares of Rs. 5 each [illegible] of the shareholding is to be cancelled.

Assuming that the scheme is dully approved by [illegible] and by the court, prepare : (1) Balance sheet of the [illegible] construction ; (2) The necessary journal entries for [illegible]

*Similar to illustration No. 15 [illegible]

scheme of reconstruction : and (3) The balance sheet after reconstruction of the company.

(B. Com., Kerala, 1966 ; I.C.W.A. Final, 1969 ; B. Com., Madurai, 1970 ; B. Com., Calicut, 1971 ; Institute of Company Secretaries 1971 ; C. A. Final 1972, Modified) 32·30

(Total of the balance sheet after reconstruction Rs. 1,52,50,000)

14. The balance sheet of a limited liability company, as on 31st December, 1976, is as stated below :

BALANCE SHEET

As on 31-12-76

Liabilities	Rs.	*Assets*	Rs.
Issued and subscribed capital :		Goodwill	42,000
45,000 equity shares of Rs. 10 each fully paid	4,50,000	Patents	18,000
3,000 6% preference shares of Rs. 100 each	3,00,000	Land and buildings	2,70,000
Sundry creditors	60,000	Plant and machinery	2,40,000
Bills payable	50,000	Stock-in-trade	88,800
Bank overdraft	1,00,000	Sundry debtors	1,50,900
		Profit and loss account	1,50,000
Rs.	9,60,000	Rs.	9,60,000

Dividends on preference shares are in arrear for three years.

The company passes a special resolution to reduce its capital in accordance with the following scheme and the same is duly sanctioned by the court :

(*a*) The preference shares are converted from 6% to 8%, but revalued in a manner in which the total return on them remains unaffected. The value of equity shares is brought down to Rs. 8 per share.

(*b*) The arrears of dividend on preference shares are cancelled.

(*c*) The debit balance of the goodwill account is written off entirely.

(*d*) Land and building and plant and machinery are revalued at 85% and 80% of their respective book values.

(*e*) Book debts to the amount of Rs. 7,200 are treated as bad, and hence, to be written off.

(*f*) The company expects to earn profit @ Rs. 45,000 per annum from the current year which would be utilised entirely for reducing the debit balance of the profit and loss account for three years. The remaining balance of the said account would be written off at the time of the capital reduction process.

(*g*) The balance of total capital reduction is to be utilised in writing down patents.

(*h*) A secured loan of Rs. 2,40,000 bearing interest at 12% p.a. is to be obtained by mortgaging tangible fixed assets for procuring cash for repayment of bank overdraft and for providing additional funds for working capital.

Journalise the above scheme and draw a balance sheet after the implementation is over. [B. Com. (Hons.) Calcutta, 1977]

(Preference Capital Rs. 2,25,000; Balance sheet total Rs. 9,35,000)

15. The business of Rundown Limited was being carried on continuously at losses. The following are the extracts from the balance sheet of the company as on 31st March 1975 :

Liabilities	Rs.	*Assets*	Rs.
Authorised, issued and subscribed capital :		Goodwill	50,000
30,000 equity shares of Rs 10 each fully paid	3,00,000	Plant	3,00,000
2,000 8% cumulative preference shares of Rs. 100 each fully paid	2,00,000	Loose tools	10,000
Share premium	90,000	*Debtors*	2,50,000
Unsecured loan (from director)	50,000	Stock	1,50,000
Sundry creditors	3,00,000	Cash	10,000
Outstanding expenses (including directors' remuneration—20,000)	70,000	Bank	35 000
		Preliminary expenses	5,000
		Profit and loss account	2,00,000
Rs.	10,10,000	Rs.	10,10,000

Note : Dividends on cumulative preference shares are in arrears for 3 years.

The following scheme of reconstruction has been agreed upon and duly approved by the court .

(1) Equity shares to be converted into 1,50,000 shares of Rs. 2 each.

(2) Equity shareholders to surrender to the company 90% of their holdings.

(3) Preference shareholders agree to forego their right to arrears to dividends in consideration of which 8% preference shares are to be converted into 9% preference shares

(4) Sundry creditors agree to reduce their claim by one-fifth in consideration of their getting shares of Rs. 35,000 out of the surrendered equity shares.

(5) Directors agree to forego the amounts due on accounts of unsecured loan and Directors' remuneration

(6) Surrendered shares not otherwise utilised to be cancelled.

(7) Assets to be reduced as under :
Goodwill by Rs. 50,000
Plant by Rs. 40,000
Tools by Rs. 8,000
Sundry debtors by Rs 15,000
Stock by Rs. 20,000

(8) Any surplus after meeting the losses should be utilised in writing down the value of the plant further.

(9) Expenses of reconstruction amounted to Rs. 10,000.

(10) Further 50,000 equity shares were issued to the existing members for increasing the working capital. The issue was fully subscribed and paid-up.

(11) Authorised capital was suitably increased.

A member holding 100 equity shares opposed the scheme and his shares were taken over by a Director on payment of Rs. 1,000 as fixed by the court.

You are required to pass the journal entries for giving effect to the above arrangement and also to draw up the resultant balance sheet of the company. (C.A. Final, 1975)

(*Balance sheet total Rs. 7,45,000*)

16. The statement of assets and liabilities of the Mars Ltd as at 31-12-1970 is as follows:

Liabilities	Rs.	*Assets*	Rs.
Preference capital:		Freehold property	1,45,000
15,000 shares of Rs. 10 each	1,50,000	Stock	50,000
Equity capital:		Debtors (estimated to produce)	2,30,000
30,000 shares of Rs. 10 each	3,00,000	Investments (market value)	70,000
Debentures	1,00,000	Deficiency	2,55,000
Loan creditors (secured by investments)	50,000		
Trade creditors	1,50,000		
	Rs. 7,50,000		Rs. 7,50,000

It is proposed to reconstruct the company on the following lines: (*a*) The loan creditors are to be paid off, but the investments are not to be sold. (*b*) The trade creditors agree to accept preference shares to the extent of 50 per cent of their dues in full satisfaction. (*c*) The debentures are to be paid at par. (*d*) Cash working capital to the extent of Rs. 1,00,000 is considered sufficient. (*e*) The preference and equity shareholders agree to take up respective shares in the reconstructed company which are to be issued to them as partly paid and to pay the remaining balance in cash (to make up for the cash required for carrying out the scheme) and make up their shares fully paid.

Assuming that the above scheme is put through, give the journal entries and the reconstructed balance sheet. (B. Com., Bangalore, 1971)

SCHEME OF CAPITAL REDUCTION

17. The accumulated losses and fictitious assets of a company to be written off amount to Rs. 2,50,000. In case the company goes into liquidation, this amount should be borne by the equity shareolders. The company has 25,000 equity shares of Rs. 10 each fully paid and 1,000 6% preference shares of Rs. 100 each fully paid. The arrears of preference dividend amount to Rs. 18,000.

Present a concise scheme of capital reduction for the reorganisation of the capital structure of the company

18. The balance sheet of Notsowell Ltd as at 30th September was as follows:

Liabilities	Rs.	*Assets*		Rs.
Issued capital : 2,000 9% non-participating pref. shares of Rs. 100 each fully paid	2,00,000	Fixed assets		9,00,000
1,00,000 Equity shares of Rs. 10 each fully paid	10,00,000	Investments		2,20,000
Reserve	2,25,000	Stock		40,000
Creditors	2,50,000	Debtors		39,000
Bank overdraft	50,000	Cash		1,000
		Profit and loss brought forward	6,00,000	
		Less Current year's profit	75,000	5,25,000
Rs.	17,25,000	Rs.		17,25,000

The market value of investments was Rs. 2,50,000. The preference share dividend was in arrear for three years. Suggest an equitable scheme of capital reduction. (*B. Com., Osmania, 1971*)

19. The following is the balance sheet of M.D. Ltd. as on 31st December, 1957 :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Goodwill	25,000
Authorised and issued :		Freehold property at cost	90,000
10,000 6% Cum. pref. shares of Rs. 10 each fully paid up	1,00,000	Plant and machinery at cost *less* Depreciation on written down value	85,000
20,000 Equity shares of Rs. 10 each fully paid up	2,00,000	Investment (market value Rs. 86,000)	80,500
	3,00,000	Stock	35,000
Creditors	75,000	*Debtors*	40,000
Bank overdraft	15,000	Cash at bank	500
General reserve	70,000	Profit and loss account	1,04,000
Rs.	4,60,000	Rs	4,60,000

Prepare a capital reduction scheme which, in your opinion, would be necessary and redraft the balance sheet after incorporating your proposals for submission to the board of directors. The cumulative preference dividends are in arrear for two years. (C.A. Final, Nov., 1958)

20. The Evergreen Company Limited is in the hands of a receiver and the following is the statement of affairs as prepared by him as on 31st March 1963 :

	Expected to rank Rs.		Expected to realise Rs.
Share capital :		Cash in hand	50,000
10,000 Equity shares of Rs. 100 each called Rs. 100		Buildings (cost 6,00,000)	7,00,000
Secured loans on building each at 12%	15,00,000	Plant and machinery (cost 10,00,000)	5,00,000
Trade creditors and bills payable	5,00,000	Sundry debtors (Book value 4,00,000)	2,00,000
Creditors for expenses	1,50,000	Share capital uncalled	5,00,000
		Deficiency for creditors	2,00,000
Rs.	21,50,000	Rs.	21,50,000

The company has turned the corner and the shareholders are anxious to reconstruct the company. Both the secured creditors and unsecured creditors are willing provided they are given some interest in the future share capital..

Suggest a scheme of reconstruction (external) which will be acceptable to all concerned and give the journal entries in the books of old company and the reconstructed company for the same. Make reasonable assumptions, if necessary. (C A. Final, 1963)

21. The Gamma Company Limited is in the hands of a receiver. The balance sheet as on 31st December, 1962 is given below :

Liabilities		Rs.	*Assets*		Rs.
Authorised capital 20,000 shares of Rs. 100 each		20,00,000	Fixed assets (depreciated value)		20,00,000
Issued, subscribed and called up capital :			Book debts		7,00,000
5,000 Equity shares of Rs. 100 each fully called up	5,00,000		Stock-in-trade at cost		11,00,000
Less Calls in arrear	1,000		Patents at cost		1,00,000
	4,99,000		Preliminary expenses		2,00,000
5,000 9% Preference shares of Rs. 100 each	5,00,000		Goodwill		4,00,000
		9,99,000	Cash in hand		10,000
Bank loan on fixed assets		15,00,000	Profit and loss account :		
12% debentures with charges : On book debts and stock-in-trade		9,00,000	Loss b/f	5,90,000	
Interest accrued on above		2,16,000	*Less* Profit for the year	1,00,000	
Bills payable		1,00,000			4,90,000
Bank overdraft (unsecured)		1,00,000			
Trade creditors		11,85,000			
	Rs.	50,00,000		Rs.	50,00,000

There is a contingent liability for preference dividend for 5 years.

The company is anxious to reconstruct and there is an offer of fresh capital provided a fair scheme is put up. The debentureholders will be agreeable to any scheme only if their interest arrears are paid off. It is expected the company can earn sufficient profits to give a decent return on all capital to be employed (present and future). The working capital requirements are estimated at Rs. 4,00,000 and a reserve of Rs. 50,000 is to be created on book debts. The preference shareholders are preferred for capital. Suggest an external scheme which will be fair to all concerned, explaining the basis or principles involved and also give journal entries in the buying company's books. (C.A. Final May, 1963)

22. As the Controller of accounts of Neopolitan Industries Ltd. you are requested by the Board of Directors of the company to suggest a scheme which would be generally acceptable to all concerned for submission to the court for its approval. Also prepare the Balance Sheet of the reconstructed company assuming that an internal scheme is adopted, and pass journal entries in the new company's books.

Liabilities	Rs.	Assets	Rs.	Rs.
Authorized Capital : 20,000 Equity Shares of Rs. 100 each	20,00,000	Fixed Assets (at cost as on 1-1-83)		38,00,000
4,000 9·3% Preference Shares of Rs. 100 each	4,00,000	Buildings	5,00,000	
		Plant and Machinery	31,00,000	
	24,00,000	Loose Tools, Live-stock etc.	2,00,000	
Issued, called and Paid-up :				
15,000 Equity Shares of Rs. 100 each Rs. 100 called and paid up	15,00,000	Stock in Trade		7,00,000
		Raw materials valued at cost	3,00,000	
4,000 Preference Shares of Rs. 100 each called Rs. 50 and paid up	2,00,000	Semi-finished Articles at works cost	2,00,000	
Advance from the Finance Corporation (secured on fixed block at 7½%)	15,00,000	Finished Articles at realizable prices	2,00,000	
Loans from Bankers (secured on stock in trade at 8%)	5,00,000	Miscellaneous Expenditure and Losses		6,00,000
Trade creditors	5,00,000	Preliminary Expenses	1,50,000	
Fixed Deposits at 12%	9,00,000	Brokerage and Commission to Shares	1,50,000	
		Loss to date	3,00,000	
	51,00,000			51,00,000

You are given the following information :

(*i*) It is estimated that if further machinery is added at a cost of Rs. 5,00,000 the plant will become an economic self-contained unit.

(*ii*) The present cost of the building is about Rs. 6,00,000 and machinery about Rs 35,00,000 The loose tools and live-stock are only worth Rs. 1,00,000

(*iii*) The company can hereafter easily earn 12% (before taxation) on capital to be employed.

(*iv*) Present equity shareholders are not in a position to put in further money as capital but are willing to advance on debentures with redemption scheme up to any extent at reasonable interest.

50% of the depositors are anxious to get back their money.

(C.A. Final November 1964)

10

Company Accounts—Liquidation

This chapter has been divided into three sections : (*i*) Legal provi-ions affecting accounting procedure of liquidation ; (*ii*) Statements of iffairs and deficiency account ; and (*iii*) Liquidator's final statement of account.

A—LEGAL PROVISIONS

The purpose of this chapter is to deal with the accounting procedure o be followed at the time of liquidation of a company. Only those legal rovisions which affect the accounting procedure and which are necessary prepare a background for understanding the accounting aspect of quidation of companies have been given.

Meaning and salient features. A company, being an artificial per-on, is created by law and effaced by law. Once the certificate of incor-oration is granted to a company, the only remedy of closing it down is to iquidate it. Liquidation is a legal procedure by which the corporate life f a company is brought to an end. The followihg are some salient eatures of liquidation :

(*a*) Any company, when found necessary, can be liquidated. It is ot necessary that only insolvent companies should be liquidated. Some-imes, even solvent companies are liquidated.

(*b*) Liquidation of a company should be distinguished from the nsolvency of a trader or of a firm. In the case of insolvency, a trader r a firm is entitled to start the businese *ab novo.* They are not forced to lischarge the unpaid balance of the past business out of the earnings of he fresh business. But in the case of liquidation, a company is closed lown for ever. Insolvency of the company may be only one of the causes f its liquidation.

(*c*) When liquidation takes place, assets of the company are realised, apital is collected and out of the proceeds claims of creditors are ettled. If any surplus is left, it is returned to the shareholders of the ompany according to their rights.

(*d*) The job of realising various assets and paying various liabilities a systematic way is performed by a person called *liquidator*. The ppointment of liquidator depends upon the mode of liquidation.

(*e*) The liquidation can take place in any of the following three ays :

(*i*) *Compulsory winding-up*. This is also called winding up by the ourt. It takes place when (*i*) company passes a special resolution, or

(*ii*) defaults in delivering the statutory report to the Registrar or in holding the statutory meeting, or (*iii*) does not commence business within a year from its incorporation or suspends business for a year, or (*iv*) its membership falls below seven (private company—two), or (*v*) is unable to pay its debt, or (*vi*) it is just and equitable in the court's opinion that the company should be wound up.

(*ii*) [illegible] further be of two types : members' [illegible] voluntary winding up. Members' vo[illegible] declaration of the company's [illegible] its directors. But when the declaration of solvency is *not* made and delivered to the Registrar it is presumed that the company is insolvent and the winding up is called a creditors' voluntary winding up.

In members' voluntary winding up the relevant control is the [illegible]

(*iii*) *Winding-up subject to supervision of court.* This mode of winding-up is comparatively rare. It is a voluntary winding up with the supervision of court. This order is made when court is satisfied of the fact that the resolution for winding up was obtained by influencing the minority holdings.

(*f*) When winding up takes place shareholders are described as '*contributories*'. The term 'contributory' means any person liable to contribute to the assets of the company in the event of its being wound up. It includes all present and all those past shareholders who have ceased to be the members within a year preceding the commencement of the winding up. The contributories are classified into two lists—List 'A' includes the present shareholders (even those shareholders who hold fully paid-up shares) and List 'B' includes the names of past shareholders. A past shareholder is liable to contribute only when the present members are unable to bring the required contributions and debts incurred by the company while he was a member remain unpaid after applying all the assets and the contributions of the present members.

(*g*) A contributory is not entitled to claim the set-off in respect of any amount due to him for dividend or any other sum. It means, a contributory must pay first the amount demanded of him and then stand to demand the amount due to him. His claim will be considered at par with other members and not with creditors.

(*h*) In the event of winding up, the liquidator must adjust the rights and interests of contributories in the following way :

(*i*) Where some class of shares are fully paid up and some are [illegible] paid creditors, must distribute [illegible] holders who have paid in full to [illegible] with those who have paid the amount partly.

(*ii*) The distribution of surplus among contributories must be in accordance with the rights provided in the Articles.

(iii) After having returned the capitals, if there still remains some surplus it must go only to equity shareholders unless it has been specifically mentioned that preference shares are participating shares.

Order of Payment. The proceeds of assets not specifically pledged with any creditor and the surplus of assets specifically pledged, if any, is available to the various claimants in the following order :

(a) Legal charges,

(b) Liquidator's remuneration,

(c) Cost and expenses of winding up,

(d) Preferential creditors,

(e) Creditors secured by floating charge, and

(f) Unsecured creditors.

If still some surplus is left it is distributed among contributories as follows :

(a) *Preferential shareholders.* Preference shareholders are entitled to the return of capital in priority to any return of capital to equity shareholders. The position of arrear of dividend on preference shares has been explained later in the chapter.

(b) *Equity shareholers.* Any amount left after paying to preference shareholders will go to equity shareholders. *If any surplus is still left it again goes to equity shareholders unless it is specifically mentioned that preference share capital is a participating share capital.* If preference shares are participating, then they have the right to share the surplus left after paying equity capital.

Preferential payments. The amount of preferential creditors is paid out of the proceeds of assets not specifically pledged left after retaining the amount necessary for cost and expenses of winding up but before making any payment to any other unsecured creditors. Preferential creditors rank equally among themselves and are paid in full unless the assets are inadequate in which case they abate in equal proportion. Sec. 530 of Companies Act states the following as preferential creditors :

(a) All revenues, taxes, cesses and rates due from the company to Central or State Government or to local authority at the relevant date and having become due and payable within the 12 months next before that date ;

(b) All wages or salaries (including wages payable for time or piece-work and salary earned wholly or in part by way of commission) of any employee in respect of services rendered to the company and due for a period not exceeding four months within the twelve months next before the *relevant date*, and any compensation payable to any workman under any of the provisions of Chapter V A of the Industrial Disputes Act, 1947, provided the amount payable to any one claimant will not exceed Rs. 1,000.

(c) All accrued holiday remuneration becoming payable to any *employee* or in case of his death, to any other person in his right on the termination of his employment before, or by the effect of, the winding up order or resolution.

Where a person advances money for the payment of employees' wages or salary and holiday remuneration stated above under (*b*) and (*c*), he will be treated as a preferential creditor.

(*d*) Unless the company is being wound up voluntarily for reconstruction or amalgamation with another company all amounts due, in respect of contributions payable during the twelve months next before the relevant date, by the company as the employer of any persons under the Employees' State Insurance Act, 1948, or any other law.

(*e*) Unless the company is being wound up voluntarily for reconstruction, or where it has taken out a workmen compensation insurance policy, all compensation due under the Workmen's Compensation Act, 1923 in respect of the death or disablement of any employee of the company.

(*f*) All sums due to an *employee* from a provident fund, pension fund, gratuity fund or any other fund for the welfare of employees maintained by the company

(*g*) The expenses of any investigation held in pursuance of Sec. 235 or 237, in so far as they are payable by the company.

Relevant date. The expression relevant date means : (*a*) In case of compulsory winding up, the date of the appointment of a provisional liquidator otherwise the date of winding-up order unless in either case the company has been commenced to be wound up voluntarily. (*b*) In any other case, the date of passing of the resolution for the voluntary winding up of the company

Preference dividend. The position of preference dividend is as under : (*a*) If preference dividend has been declared but not paid then they are paid as debt and not as arrear. (*b*) If preference dividend is in arrear for one or more years and it has not been declared then the position, unless otherwise mentioned in the articles, would be as under :

Arrears of preference dividend will be paid only when preference share capital and then equity share capital are returned in full and surplus is left

This is based on the simple logic that preference shareholders have : (*i*) priority relating to return of capital over the return of equity capital, and (*ii*) priority of payment of preference dividend over the payment of dividend to equity shareholders. [illegible] of payment of preference divide [illegible] Thus, where capitals to preference [illegible] have been returned and surplus [illegible] profit. The profit must first be used in clearing up arrears of preference dividend to equity shareholders.

Interest on liabilities The date, up to which interest on loan, debenture, etc., is payable, depends on the fact whether the company is solvent or insolvent. In case the company is *solvent* (*i.e.*, surplus is left after paying the principal and interest on all debts up to the commencement of the winding-up) interest is payable up to the date of actual

(iii) After having returned the capitals, if there still remains some surplus it must go only to equity shareholders unless it has been specifically mentioned that preference shares are participating shares.

Order of Payment. The proceeds of assets not specifically pledged with any creditor and the surplus of assets specifically pledged, if any, is available to the various claimants in the following order :

(a) Legal charges,
(b) Liquidator's remuneration,
(c) Cost and expenses of winding up,
(d) Preferential creditors,
(e) Creditors secured by floating charge, and
(f) Unsecured creditors.

If still some surplus is left it is distributed among contributories as follows .

(a) *Preferential shareholders.* Preference shareholders are entitled to the return of capital in priority to any return of capital to equity shareholders. The position of arrear of dividend on preference shares has been explained later in the chapter.

(b) *Equity shareholers.* Any amount left after paying to preference shareholders will go to equity shareholders. *If any surplus is still left it again goes to equity shareholders unless it is specifically mentioned that preference share capital is a participating share capital.* If preference shares are participating, then they have the right to share the surplus left after paying equity capital.

Preferential payments. The amount of preferential creditors is paid out of the proceeds of assets not specifically pledged left after retaining the amount necessary for cost and expenses of winding up but before making any payment to any other unsecured creditors. Preferential creditors rank equally among themselves and are paid in full unless the assets are inadequate in which case they abate in equal proportion. Sec. 530 of Companies Act states the following as preferential creditors :

(a) All revenues, taxes, cesses and rates due from the company to Central or State Government or to local authority at the rrlevant date and having become due and payable within the 12 months next before that date ;

(b) All wages or salaries (including wages payable for time or piece-work and salary earned wholly or in part by way of commission) of any employee in respect of services rendered to the company and due for a period not exceeding four months within the twelve months next before the *relevant date*, and any compensation payable to any workman under any of the provisions of Chapter V A of the Industrial Disputes Act, 1947, provided the amount payable to any one claimant will not exceed Rs. 1,000.

(c) All accrued holiday remuneration becoming payable to any *employee* or in case of his death, to any other person in his right on the termination of his employment before, or by the effect of, the winding up order or resolution.

Where a person advances money for the payment of employees' wages or salary and holiday remuneration stated above under (*b*) and (*c*), he will be treated as a preferential creditor.

(*d*) Unless the company is being wound up voluntarily for reconstruction or amalgamation with another company all amounts due, in respect of contributions payable during the twelve months next before the relevant date, by the company as the employer of any persons under the Employees' State Insurance Act, 1948, or any other law.

(*e*) Unless the company is being wound up voluntarily for reconstruction, or where it has taken out a workmen compensation insurance policy, all compensation due under the Workmen's Compensation Act 1923 in respect of the death or disablement of any employee of the company.

(*f*) All sums due to an *employee* from a provident fund, pension fund, gratuity fund or any other fund for the welfare of employees maintained by the company

(*g*) The expenses of any investigation held in pursuance of Sec 235 or 237, in so far as they are payable by the company.

Relevant date The expression relevant date means : (*a*) In case of compulsory winding up, the date of the appointment of a provisional liquidator otherwise the date of winding-up order unless in either case the company has been commenced to be wound up voluntarily. (*b*) In any other case, the date of passing of the resolution for the voluntary winding up of the company

Preference dividend The position of preference dividend is as under : (*a*) If preference dividend has been declared but not paid then they are paid as debt and not as arrear. (*b*) If preference dividend is in arrear for one or more years and it has not been declared then the position unless otherwise mentioned in the articles, would be as under :

Arrears of preference dividend will be paid only when preference share capital and then equity share capital are returned in full and surplus is left.

This is based on the simple logic that preference shareholders have (*i*) priority relating to return of capital over the return of equity capital, and (*ii*) priority of payment of [illegible] over the payment of dividend to equity shareholders. [illegible] priority of payment of preference divid[illegible] capital. Thus, where capitals to preference shareholders and equity shareholders have been returned and surplus is left then the surplus is nothing but profit. *The profit must first be used in clearing up arrears of preference dividend to equity shareholders.*

Interest on liabilities The date, up to which interest on loan, debenture, etc., is payable, depends on the fact whether the company is solvent or insolvent. In case the company is *solvent* (*i.e.*, surplus is left after paying the principal and interest on all debts up to the commencement of the winding-up) interest is payable up to the *date of actual*

payment. But if the company is *insolvent* the interest is papable only to the date of commencement of insolvency.

B—STATEMENT OF AFFAIRS AND DEFICIENCY/SURPLUS ACCOU

When a company is wound up under the order of the court or wh the official liquidator has been appoin:ed by the court as provisior liquidator, the officers and directors of the company must submit with 21 days of the court's order (or within such extended time, not exceedi 3 months, as the official liquidator or the court may permit) a stateme (called statement of affairs) showing the following :

(*a*) the assets of the company stating separately the cash balance hand and at bank, if any, and the negotiable securities, if any, held by t comany,

(*b*) its debts and liabilities,

(*c*) the names, residences and occupations of its *creditors*, stati separately the amount of secured and unsecured debts and in the case secured debts, particulars of securities given, whether by the company its officers, their value and the debts on which they were given,

(*d*) the debts due to the company and the names, residences ar occupations of the persons from whom they are due and the amount like to be realised, and

(*e*) such further or other information as may be prescribed by tl Central Government or as the official liquidator may require.

The *statement of affairs* is always open to inspection by any perso claiming in writing to be a creditor or contributory. The person concerne can demand the copy of it or extract from it. The statement of affai must always be properly verified by an affidavit. It must be prepared i a form prescribed by the law.

Prescribed form of statement of affairs

Form No. 57
(*See Rule 127*)

In the High Court at.........(*Or*) in the District Court at.........
Original Jurisdiction.........In the matter of Companies Act, 1956

In the matter of..................Ltd.
Company Petition No...–...... of 19 ..
Statement of Affairs under Section 454

Statement of affairs of the above named company as on the......day of.........19 , the date of the winding-up order (or the order appointing Provisional Liquidator or the date directed by the Official Liquidator).

I/we...of ....do solemnly affirm and say that the statement made overleaf and the several lists hereunto annexed marked 'A' to 'I' are to the best of my/our knowledge and belief a full, true and complete statement as to the affairs of the above-named

company, on the........day of......19..... the date of the winding-up [illegible] directed [illegible] carried on the following business :

(Here set out nature of company's business.)

Signature (s)

Solemnly affirmed at............before me..............this.............. day of..................19... .

Commissioner for Oaths

The Commissioner is particularly requested, before swearing the affidavit, to ascertain that the full name, address and description of the deponent are stated, and to initial any crossings-out or other alterations in the printed form. A deficiency in the affidavit in any of the above respects will entail its refusal by the Court, and will necessitate its being re-sworn.

Note. The several lists annexed are not exhibits to the affidavit.

Statement of Affairs and Lists to be Annexed

Statement as to the affairs of..................Ltd., on the.............. day of............................19......, being the date of the winding up order (or order appointing Provisional Liquidator or the date directed by the Official Liquidator as the case may be) showing assets at estimated realisable values and liabilities expected to rank :

Assets not specifically pledged (as per list 'A')	*Estimated realisable values* Rs.
Balance at bank — — — —	
Cash in hand — — — —	
Marketable securities — — — —	
Bills receivable — — — —	
Trade debtors — — — —	
Loans and advances — — — —	
Unpaid calls — — — —	
Stock-in-trade — — — —	
Work-in-progress — — — —	
.... — — — —	
.... — — — —	
Freehold property, land and buildings — —	
Leasehold property — — — —	
Plant and machinery — — — —	
Furniture, fittings, utensils, etc. — — —	
Investment other than marketable securities —	
Livestock — — — —	
Other property, *viz.,* — — — —	
________ — — — —	
________ — — — —	

*Assets specifically pledged (as per list 'B')	(a) Estimated realisable value Rs.	(b) Due to secured creditors Rs.	(c) Deficiency ranking as unsecured Rs.	(d) Surplus carried to last column Rs.
Rs.				

Estimated surplus from assets specifically pledged ...
Estimated total assets available for preferential creditors, debentureholders secured by a floating charge, and unsecured creditors (carried forward) Rs.

Summary of Gross Assets

Gross realisable value of assets specifically pledged	Rs.
Other Assets	
Gross Assets	Rs.

Gross Liabilities Rs.	Liabilities (to be deducted from surplus or added to deficiency as the case may be)	
	Secured creditors (as per list 'B') to the extent which claims are estimated to be covered by assets specifically pledged [item (a) or (b) whichever is less] (insert in 'Gross Liabilities' column only)	
	Preferential creditors (as per list 'C')	
	Estimated balance of assets available for debentureholders secured by a floating charge and unsecured creditors†	R
	Debentureholders secured by a floating charge (as per list 'D')	
	Estimated suplus/deficiency as regard debentureholders	

* Note. All assets specifically mortgaged or otherwise given as security shou be included under this head. In the case of goods given as security, those possession of the company and those not in possession should be separately s out.

† The figures must be read subject to the following notes :

(1) (f) There is no unpaid capital liable to be called up, or

(g) the nominal amount of unpaid capital liable to be called up is Rs....estima ed to produce Rs. ....which is not charged in favour of debenture holders [Strike out (f) or (g)].

(2) The estimates as subject to costs of the winding-up and to any surplus or defici ency on trading pending realisation of the assets.

	Unsecured creditors (as per list 'E'):	
	Estimated unsecured balance of claims of creditors partly secured on specific assets, brought from preceding page (c)	...
	Trade accounts	...
	Bills payable	...
	Outstanding expenses	...
	————————	...
	Contingent liabilities (state nature)	...
	————————	...
Rs.		
	Estimated surplus/deficiency as regards creditors (being difference between [illegible]	
		Rs.
	Issued and called-up capital:	
	..............preference shares of [illegible] each	
	..............called-up (as per list 'F')	
	..............Equity shares of ....each	
	..............Called up (as per list 'G')	
	Estimated surplus/deficiency as regards members (as per list 'H')	

Procedure of preparation. (a) Put down all assets, which are not specifically pledged, at their realisable value. [illegible] will include calls in arrear but [illegible]:

(b) Add to these assets any surplus, if any, [illegible] who have been secured on assets specifically pledged.

(c) From the total [illegible] having floating charge [illegible].

(d) For calculating [illegible] creditors, bills discounted [illegible] has not been secured [illegible] mains unsecured [illegible] included.

(e) After having [illegible] remaining surplus [illegible].

(f) The balance [illegible].

Form of [illegible] the case may be, [illegible] the [illegible] deficiency in the form of a [illegible]

ing to deficiency are listed first followed by items reducing deficiency. The difference between the totals is the deficiency or surplus and must tally with the figure given in the statement of affairs. The prescribed form of the account is as follows :

List 'H'—Deficiency Surplus Account

Statement of Affairs List 'H'

The period covered by this account must commence on a date not less than 3 years before the date of the winding-up order (or the order appointing Provisional Liquidator, or the date directed by the Official Liquidator) or, if the company has not been incorporated for the whole of that period, the date of formation of the company, unless the Official Liquidator otherwise agrees.

Items contributing to deficiency (or Reducing Surplus : Rs.

1. Excess (if any) of Capital and Liabilities over assets on the............19.........as shown by Balance Sheet (copy annexed).
2. Net dividends and bonuses declared during the period ....19............to the date of the statement.
3. Net trading losses (after charging items shown in note below) for the same period.
4. Losses other than trading losses written off or for which provision has been made in the books during the same period (give particulars or annex schedule).
5. Estimated losses now written off or for which provision has been made for the purpose of preparing the statement (give particulars or annex schedule).
6. Other items contributing to Deficiency or reducing Surplus.

Items reducing deficiency (or contributing to surplus) : Rs.

7. Excess (if any) of assets over capital and liabilities on the.........19.........as shown in the Balance Sheet (copy annexed).
8. Net trading profits (after charging items shown in note below) for the period from the............19.........to the date of statement.
9. Profits and income other than trading profits during the same period (give particulars or annex schedule).
10. Other items reducing Deficiency or contributing to Surplus :

Deficiency/Surplus as shown by Statement of Affairs Rs.

Note as to Net Trading Profits and Losses :

Particulars are to be inserted here (so far as applicable) of the items mentioned below, which are to be taken into account in arriving at the amount of net trading *profits or losses shown in this account*.

Provision for depreciation, renewals, or diminution in value of fixed assets

Charges for Indian Income-tax and other Indian taxation on profits

Interest on debentures and other fixed loans, payments to directors made by the Company and required by law *to be disclosed in the accounts*

Exceptional or non-recurring expenditure :

Rs.

Less : Exceptional or non-recurring receipts :

Rs.

Balance, being other trading profits or losses

Net trading profits or losses as shown in Deficiency or Surplus Account above.............. Rs.

Signature : *Dated.........19...*

Illustration 168. The following particulars were extracted from the books of Going Company Ltd on 31st March, 1970, on which date a winding-up order was made :

	Rs		Rs
Equity share capital : 20,000 shares of Rs 10 each, Rs. 5 called up	1,00,000	Rates and taxes	2,000
Calls in arrear (Rs 6,000) estimated to produce	5,000	Wages and salaries	4,000
6% Preference share capital . 20,000 shares of Rs 10 each fully called up and paid	2,00,000	Bills payable	90,000
5% Debentures secured by first floating charge	1,50,000	Creditors	80,000
Bank overdraft secured by second floating charge	15,000	Bills receivable in hand	12,000
Fully secured creditors (secured on investments)	30,000	Debtors—Good	13,000
Partly secured creditors (secured on investments)	20,000	Doubtful (estimated to produce (50%)	7,000
Investments (with fully secured creditors Rs 40,000) estimated to realise	35,000	Bad	6,000
Investments (with partly secured creditors Rs. 25,000) estimated to realise	10,000	Bills discounted Rs 30,000, likely to rank	10,000
		Contingent liability Rs 15,000, likely to be paid	7,000
		Land and building (estimated to produce Rs 1,00,000)	1,40,000
		Stock in trade (estimated to produce Rs 40 000)	60,000
		Machinery estimated to produce	2,000
		Cash in hand and at bank	200

You are required to prepare a statement of affairs and deficiency account. No journal entry for rent payable Rs 2,500 was made so far.

olution. In all questions, where trial balance is not given it is necessary rst to prepare the trial balance. The difference between debit and credits ill be taken as either accumulated loss or profit which will be taken to eficiency account.

TRIAL BALANCE

	Rs.		Rs.
Calls in arrear	6,000	Equity capital	1,00,000
Investments at book value	65,000	Preference capital	2,00,000
Bills receivable	12,000	Debentures	1,50,000
Debtors	26,000	Bank overdraft	15,000
Land and building at book value	1,40,000	Creditors—fully and partly secured	50,000
Stock in trade at book value	60,000	Rates and taxes and wages and salaries	6,000
Machinery at estimated value	2,000	Bills payable	90,000
Cash in hand	200	Creditors	80,000
Difference being the *excess of capital and liabilities over assets*	*3,79,800*		
Rs.	6,91,000	Rs.	6,91,000

Notes : 1. Trial balance is prepared with book values unless they are not given In the above case, machinery has been put at estimated value because book value is unknown.

2. Contingent liabilities for bills discounted likely to be dishonoured, and other contingent liabilities do not form a part of the trial balance.

Going Company Limited
STATEMENT OF AFFAIRS
As on 31st March, 1970

	Estimated Realisable values
	Rs.
Assets not specifically pledged (List A)	
Cash in hand and at bank	200
Bill of exchange	12,000
Trade debtors	16,500
Calls in arrear	5,000
Stock in trade	40,000
Machinery	2,000
Land and buildings	1,00,000

Assets not specifically pledged (List B)

	(a) *Estimated realisable values*	(b) *Due to secured creditors*	(c) *Deficiency ranking as unsecured*	(d) *Surplus carried to last column*
Investments	35,000	30,000	—	5,000
Investments	10,000	20,000	10,000	—
Rs.	45,000	50,000	10,000	*5,000*

Estimated surplus from assets specifically pledged	*5,000*
Estimated total assets available for preferential creditors, debentureholders and bank overdraft secured by a floating charge and unsecured creditors	1,80,700

Summary of Gross Assets

Gross realisable value of assets specifically pledged		45,000
Other assets (Rs. 1,80,700—Surplus Rs. 5,000)		1,75,700
Gross Assets	Rs.	2,20,700

Gross liabilities	*Liabilities*		
Rs.			
	(to be deducted from surplus or added to deficiency as the case may be)		
40,000	Secured creditors (as per list B) to the extent to which claims are estimated to be covered by assets specially pledged		—
6,000	Preferential creditors (as per list C)		6,000
	Estimated balance of assets available for debenture-holders and bank overdraft secured by a floating charge and unsecured creditors		1,74,700
1,50,000	Debentureholders secured by first floating charge (as per list D)		1,50,000
			24,700
15,000	Bank overdraft secured by second floating charge		15,000
	Estimated surplus as regards creditors secured by floating charge		9,700
	Unsecured creditors (as per list E)		
	Estimated unsecured balance of claim of		
10,000	Creditors partly secured on investments (see column C)	10,000	
90,000	Bills payable	90,000	
80 000	Trade creditors	80,000	
10,000	Bills discounted likely to be dishonoured	10,000	
7,000	Contingent liability likely to rank	7,000	
2,500	Rent outstanding	2,500	
4,10,500			1,99,500
	Estimated deficiency as regards creditors		1,89,800
	(Being difference between gross assets and gross liabilities)		
	Issued and called up capital		
	20,000 6% Preference share capital of Rs. 10 each fully called up and paid (as per *list F*)	2,00,000	

20,000 Equity shares of Rs. 10 each Rs. 5 called up less in arrear unrecoverable (as per list G)	99,000	2,99,000
Estimated deficiency as regards contributories (as per list H)		4,88,800[1]

[1] This deficiency will be equal to deficiency shown by deficiency account.

LISH H—DEFICIENCY ACCOUNT

		Rs.
Items contributing to deficiency (or reducing surplus) :		
Excess of capital and liabilities over assets		3,79,800
Net dividend and bonuses declared during the period...to the date of the statement		—
Net trading losses for the same period		—
Losses other than trading losses written off or for which provision has been made in the books during the same period		—
Estimated losses now written off for which provision has been made for the purpose of preparing the statement :		
on Land and building	40,000	
on Stock in trade	20,000	
on Book debts	9,500	
on Bills discounted	10,000	
on Contingent liability	7,000	
on Rent outstanding	2,500	
on Investments	20,000	1,0
		4,8
Items reducing deficiency (or contributing to surplus)		
Deficiency as shown by statement of affairs	Rs.	4

Illustration 169. The following information relates to Catastrop which was wound up on April 1, 1968 :

		Rs.	*Assets*	*Estimated to realise* Rs.
Share Capital			Land and buildings	1,80,000
10,000 8% Preference shares of Rs. 100 each fully paid		10,00,000	Plant and machinery	12,00,000
5,00,000 Equity shares of Rs. 5 each fully called	25,00,000		Furniture	50,000
Less : Calls in arrear	10,000	24,90,000	Vehicles	50,000
		34,90,000	Stock	4,00,000
			Book debts : good	—
			doubtful	1,00,00
			bad	—

Liabilities				
Secured loan (on 1st mortgage of land and buildings)	1,50,000	Bill receivable	90%	20,000
Secured loan (on floating charge of the company's undertaking)	8,00,000	Loans (considered bad)	—	1,00,000
Unsecured creditors (including preferential items Rs. 60,000)	21,60,000	Cash	—	12,000
		Bank	—	10,000

Note: (Bills discounted and awaited maturity Rs. 20,000 of which Rs. 10,000 is expected to be dishonoured).

Prepare statement of affairs (*i*) as regards creditors; and (*ii*) as regards contributories. (C.A. Final, 1970)

Solution.

STATEMENT OF AFFAIRS OF CATASTROPHE LTD

on April 1, 1968

(being the date of winding up order)

Assets not specifically pledged (List A):	*Estimated to realise*
	Rs.
Balance at bank	10,000
Cash	12,000
Bills receivable	18,000
Debtors	9,28,000
Unpaid calls	10,000
Stock	4,00,000
Plant and machinery	12,00,000
Furniture	50,000
Vehicles	50,000
	26,78,000

Assets specifically pledged (List B)

	Estimated realisable value	*Due to secured creditors*	*Deficiency ranking as unsecured*	*Surplus carried to last column*	
	Rs.	Rs.	Rs.	Rs.	
Land and building	1,80,000	1,50,000	—	30,000	
Estimated surplus from assets specifically pledged					30,000
Estimated total assets available for preferential creditors, creditors secured by a floating charge and unsecured creditors					27,08,000

Summary of gross assets

Gross realisable value of assets specifically pledged	1,80,000	
Other assets	26,78,000	
Gross assets	28,58,000	

20,000 Equity shares of Rs. 10 each Rs. 5 called up less in arrear unrecoverable (as per list G)	99,000	2,99,000
Estimated deficiency as regards contributories (as per list H)		4,88,800[1]

[1] This deficiency will be equal to deficiency shown by deficiency account.

LISH H—DEFICIENCY ACCOUNT

Items contributing to deficiency (or reducing surplus) :

			Rs.
Excess of capital and liabilities over assets			3,79,800
Net dividend and bonuses declared during the period...to the date of the statement		—	
Net trading losses for the same period		—	
Losses other than trading losses written off or for which provision has been made in the books during the same period		—	
Estimated losses now written off for which provision has been made for the purpose of preparing the statement :			
on Land and building	40,000		
on Stock in trade	20,000		
on Book debts	9,500		
on Bills discounted	10,000		
on Contingent liability	7,000		
on Rent outstanding	2,500		
on Investments	20,000		
			1,09,000
			4,88,800
Items reducing deficiency (or contributing to surplus)			*Nil*
Deficiency as shown by statement of affairs		Rs.	4,88,800

Illustration 169. The following information relates to Catastrophe Ltd which was wound up on April 1, 1968 :

Share Capital		Rs.	*Assets*	*Estimated to realise* Rs.	*Book value* Rs.
10,000 8% Preference shares of Rs. 100 each fully paid		10,00,000	Land and buildings	1,80,000	3,00,000
5,00,000 Equity shares of Rs. 5 each fully called	25,00,000		Plant and machinery	12,00,000	15,00,000
Less : Calls in arrear	10,000		Furniture	50,000	30,000
		24,90,000	Vehicles	50,000	10,000
		34,90,000	Stock	4,00,000	8,00,000
			Book debts : good	—	8,28,000
			doubtful	1,00,000	1,50,000
			bad	—	40,000

Liabilities		Bill receivable	90%	20,000
Secured loan (on 1st mortgage of land and buildings)	1,50,000	Loans (considered bad)	—	1,00,000
Secured loan (on floating charge of the company's undertaking)	8,00,000	Cash	—	12,000
Unsecured creditors (including preferential items Rs. 60,000)	21,60,000	Bank	—	10,000

Note : (Bills discounted and awaited maturity Rs. 20,000 of which Rs. 10,000 is expected to be dishonoured).

Prepare statement of affairs (*i*) as regards creditors; and (*ii*) as regards contributories. **(C.A. Final, 1970)**

Solution.

STATEMENT OF AFFAIRS OF CATASTROPHE LTD
on April 1, 1968
(being the date of winding up order)

Assets not specifically pledged (List A) :	*Estimated to realise*
	Rs.
Balance at bank	10,000
Cash	12,000
Bills receivable	18,000
Debtors	9,28,000
Unpaid calls	10,000
Stock	4,00,000
Plant and machinery	12,00,000
Furniture	50,000
Vehicles	50,000
	26,78,000

Assets specifically pledged (List B)

	Estimated realisable value	*Due to secured creditors*	*Deficiency ranking as unsecured*	*Surplus carried to last column*	
	Rs.	Rs.	Rs.	Rs.	
Land and building	1,80,000	1,50,000	—	30,000	
Estimated surplus from assets specifically pledged					30,000
Estimated total assets available for preferential creditors, creditors secured by a floating charge and unsecured creditors					27,08,000

Summary of gross assets

Gross realisable value of assets specifically pledged	1,80,000
Other assets	26,78,000
Gross assets	28,58,000

20,000 Equity shares of Rs. 10 each Rs. 5 called up less in arrear unrecoverable (as per list G)	99,000	2,99,000
Estimated deficiency as regards contributories (as per list H)		4,88,800[1]

[1] This deficiency will be equal to deficiency shown by deficiency account.

LISH H—DEFICIENCY ACCOUNT

Items contributing to deficiency (or reducing surplus) :

			Rs.
Excess of capital and liabilities over assets			3,79,800
Net dividend and bonuses declared during the period...to the date of the statement		—	
Net trading losses for the same period		—	
Losses other than trading losses written off or for which provision has been made in the books during the same period		—	
Estimated losses now written off for which provision has been made for the purpose of preparing the statement :			
on Land and building	40,000		
on Stock in trade	20,000		
on Book debts	9,500		
on Bills discounted	10,000		
on Contingent liability	7,000		
on Rent outstanding	2,500		
on Investments	20,000		
			1,09,000
			4,88,800
Items reducing deficiency (or contributing to surplus)			*Nil*
Deficiency as shown by statement of affairs		Rs.	4,88,800

Illustration 169. The following information relates to Catastrophe Ltd which was wound up on April 1, 1968 :

Share Capital		Rs.	*Assets*	*Estimated to realise* Rs.	*Book value* Rs.
10,000 8% Preference shares of Rs. 100 each fully paid		10,00,000	Land and buildings	1,80,000	3,00,000
5,00,000 Equity shares of Rs. 5 each fully called	25,00,000		Plant and machinery	12,00,000	15,00,000
Less : Calls in arrear	10,000		Furniture	50,000	30,000
		24,90,000	Vehicles	50,000	10,000
			Stock	4,00,000	8,00,000
			Book debts : good	—	8,28,000
		34,90,000	doubtful	1,00,000	1,50,000
			bad	—	40,000

Liabilities				
Secured loan (on 1st mortgage of land and buildings)	1,50,000	Bill receivable	90%	20,000
Secured loan (on floating charge of the company's undertaking)	8,00,000	Loans (considered bad)	—	1,00,000
Unsecured creditors (including preferential items Rs. 60,000)	21,60,000	Cash	—	12,000
		Bank	—	10,000

Note : (Bills discounted and awaited maturity Rs. 20,000 of which Rs. 10,000 is expected to be dishonoured).

Prepare statement of affairs (*i*) as regards creditors; and (*ii*) as regards contributories. **(C.A. Final, 1970)**

Solution

STATEMENT OF AFFAIRS OF CATASTROPHE LTD
on April 1, 1968
(being the date of winding up order)

Assets not specifically pledged (List A) :	*Estimated to realise*
	Rs.
Balance at bank	10,000
Cash	12,000
Bills receivable	18,000
Debtors	9,28,000
Unpaid calls	10,000
Stock	4,00,000
Plant and machinery	12,00,000
Furniture	50,000
Vehicles	50,000
	26,78,000

Assets specifically pledged (List B)

	Estimated realisable value	*Due to secured creditors*	*Deficiency ranking as unsecured*	*Surplus carried to last column*	
	Rs.	Rs.	Rs.	Rs.	
Land and building	1,80,000	1,50,000	—	30,000	
Estimated surplus from assets specifically pledged					30,000
Estimated total assets available for preferential creditors, creditors secured by a floating charge and unsecured creditors					27,08,000

Summary of gross assets

Gross realisable value of assets specifically pledged	1,80,000
Other assets	26,78,000
Gross assets	28,58,000

Gross liabilities	Liabilities		
	Secured creditors (as per list B) to the extent to which claims are estimated to be covered		
1,50,000	by assets specifically pledged		—
60,000	Preferential creditors (*list C*)		60,000
	Estimated balance of assets available for creditors secured by a floating charge and unsecured creditors		26,48,000
8,00,000	Creditors secured by a floating charge (*list D*)		8,00,000
	Estimated surplus as regards creditors secured by a floating charge		18,48,000
	Unsecured creditors (*list E*)		
21,10,000	Trade accounts	21,00,000	
	Contingent liabilities	10,000	
			21,10,000
31,20,000			
	Estimated deficiency as regards creditors, being the difference between gross liabilities and gross assets		2,62,000
	Issued and paid-up capital :		
	10,000 Preference shares of Rs. 100 each fully called (*as per list F*)	10,00,000	
	5,00,000 Equity shares of Rs. 5 each fully called (*list G*)	25,00,000	
			35,00,000
	Estimated deficiency as regards contributories		Rs. 37,62,000

C—LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

Liquidator's final statement of account takes the form of cash account where on the left-hand side he records the receipts on various accounts and on the right-hand side the payments. This account is prepared by all liquidators whatever may be the mode of winding up of the company. After preparing the final account, the liquidator submits it to the *court* in case of compulsory winding up and to the *company* in case of voluntary winding up, *i.e.*, he has to submit it to that party who appointed him. Following are certain matters which requirethe attention of students :

Liquidator's remuneration. He normally gets remuneration in form of commission which is based as a percentage on assets realised and

on payments made to unsecured creditors. In calculating his remuneration a student is confused on the following points :

(*a*) *Assets given as security to fully and partly secured creditors.* It is recommended that instead of calculating commission on total value of assets given as security, take only the surplus from such assets for the purpose of calculating commission. It is normally assumed that secured creditors have realised themselves the assets given to them as security. The liquidator has only made an effort of realising the surplus from such creditors and he is entitled to commission on that part.

(*b*) *Cash and bank balance.* Should liquidator get commission on cash and bank balances already existing ? There is a diversified opinion of authors on this point. In our opinion he should not get any commission on the cash balance if it is to be based on the assets realised. In order to avoid any confusion it is better that students should give a note about the treatment followed by them.

(*c*) *Preferential creditors.* When liquidator's commission is based on the amount paid to unsecured creditors, preferential creditors are also taken into consideration because they are also unsecured creditors.

(*d*) *Commission in case of deficiency.* Sometimes the amount left for paying unsecured creditors is less than the required amount. Under such circumstances, the commission is to be calculated carefully. If the whole amount which is available for payment is assumed to be paid to creditors, then nothing will be left for the remuneration In fact, the amount left is to be divided between creditors and liquidators as explained in the following example :

	Rs.
Creditors to be paid	60,000
Commission to be given on the amount paid to creditors	10%
Total amount available	44,000
The calculation of commission will be as follows :	
$\frac{10}{110} \times$ Rs. 44,000	4,000

This is done because out of Rs 44,000, if commission is Rs 4,000, the amount available for creditors will be Rs. 40,000. And now, as per terms, he will be given commission at 10% of the amount paid to creditors which is Rs. 4,000, *i.e.*, $\frac{10}{100} \times$ Rs. 40,000. It is wrong to calculate commission at 10% on Rs. 44,000.

Illustration 170 The liquidator of a company in voluntary liquidation is entitled to a remuneration of 3% on the amount realised (excluding the cash on hand) and at 2% on the amount distributed to the unsecured creditors including preferential creditors of Rs. 5,000 amounted to Rs. unsecured creditors 40,000,

Debentureholders were paid Rs. 51,875 together with interest. Preferential creditors were paid in full. Rs. 510 were spent as costs of liquidation.

Gross liabilities	Liabilities		
	Secured creditors (as per list B) to the extent to which claims are estimated to be covered		—
1,50,000	by assets specifically pledged		
60,000	Preferential creditors (*list C*)		60,000
			26,48,000
	Estimated balance of assets available for creditors secured by a floating charge and unsecured creditors		
8,00,000	Creditors secured by a floating charge (*list D*)		8,00,000
	Estimated surplus as regards creditors secured by a floating charge		18,48,000
	Unsecured creditors (*list E*)		
21,10,000	Trade accounts	21,00,000	
	Contingent liabilities	10,000	
			21,10,000
31,20,000			
	Estimated deficiency as regards creditors, being the difference between gross liabilities and gross assets		2,62,000
	Issued and paid-up capital :		
	10,000 Preference shares of Rs. 100 each fully called (*as per list F*)	10,00,000	
	5,00,000 Equity shares of Rs. 5 each fully called (*list G*)	25,00,000	
			35,00,000
	Estimated deficiency as regards contributories		Rs. 37,62,000

C—LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

Liquidator's final statement of account takes the form of cash account where on the left-hand side he records the receipts on various accounts and on the right-hand side the payments. This account is prepared by all liquidators whatever may be the mode of winding up of the company. After preparing the final account, the liquidator submits it to the *court* in case of compulsory winding up and to the *company* in case of voluntary winding up, *i.e.*, he has to submit it to that party who appointed him. Following are certain matters which requirethe attention of students :

Liquidator's remuneration. He normally gets remuneration in form of commission which is based as a percentage on assets realised and

on payments made to unsecured creditors. In calculating his remuneration a student is confused on the following points :

(*a*) *Assets given as security to fully and partly secured creditors.* It is recommended that instead of calculating commission on total value of assets given as security, take only the surplus from such assets for the purpose of calculating commission. It is normally assumed that secured creditors have realised themselves the assets given to them as security. The liquidator has only made an effort of realising the surplus from such creditors and he is entitled to commission on that part.

(*b*) *Cash and bank balance* Should liquidator get commission on cash and bank balances already existing ? There is a diversified opinion of authors on this point. In our opinion he should not get any commission on the cash balance if it is to be based on the assets realised. In order to avoid any confusion it is better that students should give a note about the treatment followed by them.

(*c*) *Preferential creditors.* When liquidator's commission is based on the amount paid to unsecured creditors, preferential creditors are also taken into consideration because they are also unsecured creditors.

(*d*) *Commission in case of deficiency.* Sometimes the amount left for paying unsecured creditors is less than the required amount. Under such circumstances, the commission is to be calculated carefully. If the whole amount which is available for payment is assumed to be paid to creditors, then nothing will be left for the remuneration In fact, the amount left is to be divided between creditors and liquidators as explained in the following example :

	Rs.
Creditors to be paid	60,000
Commission to be given on the amount paid to creditors	10%
Total amount available	44,000
The calculation of commission will be as follows :	
$\frac{10}{110} \times$ Rs. 44,000	4,000

This is done because out of Rs 44,000, if commission is Rs. 4,000, the amount available for creditors will be Rs 40,000. And now, as per terms, he will be given commission at 10% of the amount paid to creditors which is Rs. 4,000, *i.e.*, $\frac{10}{100} \times$ Rs. 40,000. It is wrong to calculate commission at 10% on Rs. 44,000.

Illustration 170. The liquidator of a company in voluntary liquidation is entitled to a remuneration of 3% on the amount realised (excluding the cash on hand) and at 2% on the amount distributed to the unsecured creditors-including preferential creditors of Rs. 5,000 amounted to Rs. unsecured creditors 40,000,

Debentureholders were paid Rs. 51,875 together with i Preferential creditors were paid in full. Rs. 510 were spent as liquidation.

Cash on hand was Rs. 1,000 and assets realised Rs. 79,000. Find out liquidator's total remuneration. (B. Com. Saurashtra April 1978)

Solution. *Calculation of liquidator's Remuneration :*

	Rs.	Rs.	Rs.
Assets realised	79,000		
3% on assets realised			2,37
Total amount available for distribution (including cash on hand)		80,000	
Less : Liquidation expenses	510		
Part of liquidator's Remuneration	2,370		
Debentureholders	51,875	54,775	
Amount available for distribution to unsecured creditors		25,245	
2% on amount distributed to unsecured creditors $\left(25,245 \times \frac{2}{102}\right)$			49
Liquidators's total remuneration		Rs.	2,86

Order of payment. The liquidator must make the payment in th following order :

(1) Liquidation expenses—this includes legal charges, liquidator remuneration, auctioneer's and valuer's charges, cost of possession an maintenance of assets, cost of notice in gazette and newspapers, incident outlay.

(2) Preferential creditors,
(3) Creditors having floating charge,
(4) Unsecured creditors,
(5) Preference share capital,
(6) Equity capital, and

(7) Any surplus left will be used first for paying arrears of p ference dividend and then for distribution among equity sharehold unless otherwise stated.

It is generally assumed that liquidator has not to make the paym to secured creditors as they realise their own securities. However, liquidator collects any surplus from the secured creditors and shows on the receipts side of the account.

Form of account. The form of account is given below.

Form No. 156

(See Rule 329)

Companies Act, 19 6

*Here state whether the winding-up is a members' or creditors' voluntary winding-up or a winding-up under the supervision of the Court. If under the supervision of the Court, mention the number of the petition in which the order was made and the date of the order.

* Strike out what does not apply.

Liquidator's Statement of Account of the Winding-up (Members'/Creditors' Voluntary Winding-up)

Pursuant to Section 497/509 †

1. Name of the company..............Ltd.
2. Nature of proceeding.*
3. Date of commencement of the winding-up.
4. Name and address of the Liquidator.

Statement showir[illegible] the property of the cc[illegible] mencement of winding-[illegible]

Receipts	*Estimated Value Rs.*	*Value realised Rs.*	*Payments*	Rs.	*Rs*
Assets :					
Cash at bank			Legal charges		
Cash in hand			Liquidator's remuneration ·		
Marketable securities			Where applicable		
Bills receivable			%on Rs......realised		
Trade debtors			%on Rs ..distributed		
Loans and advances			Total ...		
Stock in trade					
Work-in-progress			(By whom fixed....)		
Freehold property			Auctioneer's and valuer's charges		
Leasehold property			Cost of possession and maintenance of estate		
Plant and machinery			Cost of notice in Gazette and newspapers		
Furniture, fittings, utensils, etc.			Incidental outlay (establishment charges and other expenses of liquidation) Total costs and charges		
Patents, trade marks, etc.			(*i*) Debentureholders :		
Investments other than marketable securities			Payment of Rs...... ... per Rs............ debenture		
Surplus from securities			Payment of Rs...... ......per Rs............ debenture		
Unpaid calls at commencement of winding up			Payment of Rs...... ......per Rs............ debenture		
Amounts received from calls on contributories made in the winding-up					
Receipts per trading account					
Other property, *viz.*,					
....					
....					
Total......					

			(ii) Creditors :		
			......*Preferential		
Less .			......*Unsecured :		
Payments to redeem securities			Dividend(s)... ..P. in the rupee on Rs. (The estimate of the amount expected to rank for dividend was Rs.....)		
Costs of execution			(iii) Returns to contributories :		
Payment per trading account			......P. per rupee...		
			...†share...........		
			......P. per rupee...		
			...†share...........		
			......P. per rupee...		
			...†share...........		
			Add balance		

* State the number ; Preferential creditors need not be separately shown if all creditors have been paid in full.

† State nominal value and class of share.

(1) The following assets estimated to be of Rs.......have proved to be unrealisable :

(Give details of the assets which have proved to be unrealisable)

(2) Amount paid into the company's liquidation account in respect of :

(a) Unclaimed dividends payable to creditors in the winding-up. Rs...........

(b) Other unclaimed distributions in the winding-up Rs...........

(c) Moneys held by the company in trust in respect of dividends or other sum due before the commencement of winding-up to any person as a member of the company Rs...........

(3) Add here any remarks the liquidator thinks desirable :

Dated this.........day of......19... (Sd.) *Liquidator*

I declare that the above statement is true and contains a full and accurate account of the winding-up from the commencement to the close of the winding-up

Dated this.........day of......19... (Sd.) *Liquidator*

Illustration 171. The Ultra Optimist Ltd went into liquidation. Its assets realised Rs. 3,50,000 excluding amount realised by sale of securities held by the secured creditors. The following was the position :

	Rs.		Rs
Share capital : 1,000 shares of Rs. 100 each		Debentures having a floating charge on the assets of the company	2,50,0
Secured creditors (securities realised Rs. 40,000)	35,000	Liquidation expenses	5,0
Preferential creditors	6,000	Liquidator's remuneration	7,5
Unsecured creditors	1,40,000		

Prepare the liquidator's final statement of account.

[B. Com (Hons.) Delhi, 1974

Solution :

THE ULTRA OPTIMIST LTD
LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

	Rs		Rs
Assets realised	3,50,000	Liquidator's remuneration	7,5
Surplus from secured creditors	5,000	Liquidation expenses	5,0
		Debentures having floating charge	2,50,0
		Preferential creditors	6,0
		Unsecured creditors (balancing figure)	86,5
Rs	3,55,000	Rs.	3,55,0

Note : Since creditors have not been paid in full, there is n question of paying to shareholders.

Illustration 172. Khaki Bawa Private Ltd. went into voluntary liquida tion on April, 1969, on which date its position was as under :—

	Rs.		Rs
Share capital : 5,000 shares of Rs 100 each, Rs 80 per share paid	4,00,000	Land, Building & Machinery	80,0
Loans (Secured by mortgage of Land, Building and Machinery)	1,00,000	Other fixed assets	2,60,0
Unsecured Loan and Liabilities (including Preferential dues Rs 10,000)	2,00,000	Stock	1,05,0
		Debtors	1,00,0
		Loans	40,0
		Cash	5,0
		Profit and Loss A/c.	1,10,0
	7,00,000		7,00,0

Land, Building and Machinery were realised by secured creditor for Rs. 1,20,000. Other fixed assets fetched Rs. 40,000. Debtor Rs. 20,000. Stock Rs. 10,000. Loans were wholly bad. The liquidator i entitled to a fixed remuneration of Rs. 1,000 plus 2% of the amount paic to unsecured creditors. The liquidator's out-of-pocket expenses amountec to Rs. 1,000.

Show Liquidator's Statement of Account (B. Com Bombay, 1970)

Solution. LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

	Rs.			Rs.
Assets Realisations :		Liquidator's remuneration .		
Cash	5,000	Fixed remuneration	1,000	
Surplus from Securities	20,000	2% on Rs. 1,79,412	3,588	4,588
Other fixed assets	40,000			
Stocks	10,000	Expenses of liquidation		1,000
Debtors	20,000	Preferential creditors		10,000
Calls on 5,000 shars at Rs. 20 per share	1,00,000	Unsecured creditors		1,79,412
	1,95,000			1,95,000

Here the least number of draws he has to make is 2 and the maximum number 50. Thus in $(n-1)$ draws he will get one of the three aces and in the nth, one ace. Hence the probability of such an occurrence

$$=\frac{3\times{}^4C_1\times{}^{48}C_{n-2}}{{}^{52}C_{n-1}}\times\frac{1}{52-(n-1)}$$

$$=\frac{3\times4\times(n-1)(52-n)(51-n)}{52\times51\times50\times49}$$

$$=\frac{(n-1)(52-n)(51-n)}{50\times49\times17\times13}$$

Calls-in-arrear and Calls-in-advance:

Where there are preference shares and partly paid equity shares, liquidator, if necessary, has to make a call in order to repay the preference shareholders. One or more shareholders may fail to pay such calls. In such cases if the surplus after the payment to preference shareholders is not sufficient for the return of equity capital in full, such surplus will be first utilised to return the share capital of those who have paid the call, till the paid-up capital equals the amount paid by the defaulting members. If there is still surplus then it will be distributed equally among all, including the defaulting shareholders.

If some shareholders have paid money without the call being made such calls-in-advance will have priority in repayment over the paid-up share capital of that class

Illustration 173. The capital of the Datar Company Limited was as follows:

(1) 4,000 equity shares of Rs. 100 each fully paid;

(2) 3,000 equity shares of Rs. 100 each, Rs. 80 per share paid up;

(2) 1,000 preference shares of Rs. 100 each fully paid (these shares have preference as to capital) and,

(4) 1,000 deferred shares of Rs. 100 each, Rs. 80 per share paid-up. (these shares, under the articles are to be paid after satisfying the claims of equity shareholders)

The various creditors amounted in all to Rs. 1,00,000 including the liquidator's remuneration Rs. 2,500. The liquidator made a call of the remaining Rs. 20 on the deferred shares which was paid in full. He also realised all the assets amounting to Rs. 1,91,000.

A call of Rs. 15 per share was made on the equity shares which were partly paid up. This was paid in full with the exception of that on 100 shares.

Prepare the liquidator's account showing the return to the shareholders.

(B. Com. Bangalore May, 1978)

Solution:

LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

		Rs.		Rs.
Assets realised		1,91,000	Liquidator's remuneration	2,500
Call on 3,000 equity shares at Rs 15 per share	45,000		*Creditors*	97,500
Less calls in arrear (100×Rs. 15)	1,500		Preference shareholders	1,00,000
		43,500	Equity shareholders :	
Call on 1,000 deferred shares at Rs. 20 per share		20,000	(1) On fully paid shares at Rs. 10 per share	40,000*
			(2) On partly paid shares at Rs. 5 per share	14,500*
		Rs. 2,54,500		Rs. 2,54,500

Surplus	54,500
Return of Rs. 5 per share on 4,000 shares (*to reduce them to Rs. 95* paid up)	20,000
Balance	34,500
Return of Rs. 5 per share on 6,900 shares (balance equally distributed among all except those who are in default)	34,500
	Nil

The shareholders who have failed to pay the calls will not receive anything, as their deficiency is only Rs. 80, compared to Rs. 90 suffered by others.

Adjusting the rights of contributories when the paid-up amount on shares varies :

In some problems one comes across equity shares with different amounts paid-up. In such cases the question of determining the amount to be refunded or the amount to be called up in order to adjust the rights of contributories' interest is of great importance. A few illustrations are given to explain the procedure in such cases.

Illustration 174. Bekar Limited went into voluntary liquidation. The details regarding liquidation are as follows :

Share capital :

1. [illegible] of Rs. 100 each (fully paid-up)
2. [illegible] 75 paid-up)
3. [illegible] 60 paid-up)
4. [illegible] 50 paid-up)

Assets including machinery realised Rs. 4,20,000. Liquidation expenses amount to Rs. 15,000.

Bekar Limited has borrowed a loan of Rs. 50,000 from Patel Brothers against the mortage of machinery (which realised Rs 80,500). In the books of the company salaries of four clerks for four months at a rate of Rs. 300 per month and salaries of four peons for three months at a rate of Rs. 150 per month, are outstanding. In addition to this, the company's books show the creditors worth Rs 87,400. Prepare liquidator's statement of receipts and payments (B. Com. Gujarat, 1978)

* Surplus of Rs. 54,500 available to equity shareholders is distributed as given below :

Solution.

LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

	Rs.		Rs.
Assets realised	3,39,500	Expenses of liquidation	15,000
Surplus from secured creditors	30,500	Preferential creditors	5,800*
Proceeds of call at Re. 1 per share on class 'C' shares	1,400**	Unsecured creditors	88,200
		Preference shareholders	2,00,000
		Return of Rs. 24 per share on 'A' class shares	48,000**
		Return of Rs. 9 per share on 'B' class shares	14,400**
Rs.	3,71,400	Rs.	3,71,400

Before proceeding to discuss the method, it is essential to calculate the surplus available to equity shareholders and from that the deficiency they will have to suffer having regard to their claims against the company.

Calculation of surplus :

	Assets realised		Rs. 4,20,000
Less :	Liquidation expenses	15,000	
	Preferential creditors	5,800	
	Secured creditors	50,000	
	Unsecured creditors	88,200	1,59,000
	Balance		2,61,000
Less :	Capital to be returned to preference shareholders		2,00,000
	Balance being surplus available to equity shareholders		61,000

Calculation of deficiency :

		Rs.
	Equity share capital to be returned :	
	2,000 shares at Rs. 75 per share	1,50,000
	1,600 shares at Rs. 60 per share	96,000
	1,400 shares at Rs. 50 per share	70,000
	Total to be returned	3,16,000
Less :	Surplus available	61,000
	Deficiency to be borne by equity shareholders	2,55,000

* Preferential creditors :

Salary of clerks : For 4 persons at Rs. 1,200 each restricted to Rs. 1,000	4,000
Salary of peons : For 4 peons at Rs. 450 each	1,800
Total	5,800

** Adjustment of rights of contributories :

This can be worked out in several ways and the student can adopt any method which he finds convenient.

I Method

$$\text{Deficiency per shareholder} = \frac{\text{Total deficiency}}{\text{No. of shares}}$$

$$= \frac{\text{Rs. } 2{,}55{,}000}{5{,}000} = \text{Rs. } 51$$

	'A' shares	'B' shares	'C' shares
	Rs	Rs.	Rs.
Paid up amount	75	60	50
Deficiency per share	51	51	51
Net amount returnable or receivable	24	9	– 1

From the above it is clear that the liquidator will have to return Rs. 24 and Rs. 9 to 'A' shareholders and 'B' shareholders respectively and make a call of Re. 1 on C shares. This method can, however, be applied only when the nominal value of all the shares is the same.

II Method

Because of the limitation of the first method, deficiency is calculated in this method as a percentage, so that there is no difficulty even if shares are of different nominal values.

$$\% \text{ of deficiency} = \frac{\text{Total deficiency}}{\text{Nominal value of shares}} \times 100$$

$$= \frac{\text{Rs. } 2{,}55{,}000}{\text{Rs. } 5{,}00{,}000} \times 100 = 51\%$$

	'A' shares	'B' shares	'C' shares
	Rs.	Rs.	Rs.
Paid-up amount	75	60	50
Less Loss to be suffered at 51% of the nominal value	51	51	51
Net amount returnable or receivable	24	9	(–) 1

III Method

Under this method, the amount that will be returned to the shareholders on the basis of the notional call is ascertained. Then the net amount returnable or receivable from each category of shareholder is calculated with reference to the amount to be called and amount to be returned as shown below.

	Rs.
Amount receivable on the basis of notional call :	
On 2,000 'A' shares at Rs. 25 per share	50,000
On 1,600 'B' shares at Rs. 40 per share	[illegible]

On 1,400 'C' shares at Rs. 50 per share	70,000
Total receivable	1,84,000
Add : Surplus on hand	61,000
Total amount available for distributon	2,45,000

$$\text{Amount returnnble on each share} = \frac{\text{Amount available}}{\text{No. of shares}}$$

$$= \frac{\text{Rs. } 2,45,000}{5,000} = \text{Rs. } 49$$

	A shares Rs.	*B* shares Rs.	*C* shares Rs.
Amount to be returned	49	49	49
Amount to be called	25	40	50
Net amount to be returned or called	24	9	(−)1

This method has again the same limitation as the first, namely, it can be used only when all the shares have the same nominal value.

Illustration 175. The position of *X* Ltd in liquidation is as follows :

Issued share capital :

1,000 6% Preference shares of 100 each, fully paid (arrear of dividend of one year)
1,000 Equity shares of Rs. 50 each, fully paid.
1,000 Equity shares of Rs. 40 each, Rs. 30 paid.
Calls in arrear Rs. 4,000
Calls in advance Rs. 6,000.
Cash left after making payments to creditors but before making any call Rs. 1,16,000.

You are required to prepare liquidator's final statement of account. What will be the position if cash in hand is Rs. 1,34,000. Assume Articles include the provision relating to payment of preference dividend in priority to the equity capital.

Solution.

Case I

Step 1. Total deficiency :

Cash to be paid on preference shares		1,00,000
Cash to be paid on preference dividend for one year		6,000
Cash to be paid on Rs. 50 equity capital		50,000
Cash to be paid on Rs. 40 equity capital Rs. 30 paid	30,000	
Less : Calls in arrear	4,000	26,000
Cash to be paid on calls in advance		6,000

Total cash to be paid	1,88,000
Less : Cash in hand	1,16,000
Deficiency	72,000

Step 2. Percentage of deficiency to be suffered :

$$= \frac{\text{Rs } 72{,}000}{\text{Rs. } 50{,}000 + \text{Rs. } 40{,}000} \times 100 = \frac{72{,}000}{90{,}000} \times 100 = 80\%$$

Step 3. Actual Loss to be suffered :

Rs. 50 Equity shares will suffer $\frac{80}{100} \times$ Rs. 50 = Rs. 40

Rs. 40 Equity shares will suffer $\frac{80}{100} \times$ Rs. 40 = Rs. 32

LIQUIDATOR'S FINAL STATEMENT ACCOUNT

	Rs.		Rs.
Cash in hand	1,16,000	Calls in advance	6,000
Calls in arrear	4,000	Preference capital	1,00,000
Cash at Rs 2 per share (from Rs. 40 Equity Share capital)	2,000	Preference dividend	6,000
		Return of Rs. 10 on Rs. 50 equity capital	10,000
	Rs. 1,22,000		Rs. 1,22,000

Case 2

Deficiency = Rs. 1,88,000 − Rs. 1,34,000 = Rs. 54,000

Percentage of deficiency $= \frac{54{,}000}{90{,}000} \times 100 = 60\%$

Actual loss to be suffered = on Rs. 50 Equity shares = Rs. 30
on Rs. 40 Equity shares = Rs. 24.

LIDUIDATOR'S STATEMENT

Balance of cash	Rs 1,34,000	Calls in advance		Rs. 6,000
		Preference capital		1,00,000
		Preference dividend		6,000
		Return on Rs 50 equity capital at Rs. 20 per share		20,000
		Return on Rs. 40 equity capital at Rs 6 per share	6,000	
		Less : calls in arrear	4,000	
				2,000
	Rs 1,34,000			Rs 1,34,000

Note. It has been assumed that call in arrear from shareholders is less than Rs. 6 per share. In these cases the amount of arrear has been deducted from the claim of Rs. 6 and the balance has been paid. If it were more than Rs. 6 then the excess would have been called from them and they would not have been returned any amount

Illustration 176 A company went into liquidation on 31st March, 1970 when the following balance sheet was prepared ·

		Rs.		Rs.
Subscribed capital .			Goodwill and patents	50,000
19,500 shares of Rs. 10 each fully paid		1,95,000	Freehold building	48,000
Sundry creditors :			Plant	65,500
Preferential	24,200		Stock-in-trade	56,800
Partly secured (on freehold property)	55,310		Sundry debtors	64,820
			Cash	2,500
			Profit and loss account	98,680
Unsecured	99,790			

	1,79,300		
Bank overdraft (unsecured)	12,000		
	Rs. 3,86,300		Rs. 3,86,300

The liquidator realised the assets as follows: Freehold property Rs. 35,000, plant Rs. 51,000, stock-in-trade Rs. 39,000, sundry debtors Rs. 58,500 and cash Rs. 2,500.

The expenses of liquidation amounted to Rs. 1,000 and the liquidator's remuneration was agreed at 2½% on the amount realised and 2% on the amount paid to unsecured creditors.

You are required to prepare the liquidator's final account. (C. A. Final)

Solution. *Calculation of* liquidator's *remuneration* :

		Rs.	Rs.
(*i*)	Assets realised (as per question) :		
	Leasehold property	35,000	
	Plant	51,000	
	Stock-in-trade	39,000	
	Sundry debtors	58,500	
	Cash	2,500	
		Rs. 1,86,000	
	2½% of Rs. 1,86,000		4,650
(*ii*)	Amount available for unsecured creditors and for the further remuneration :		
	Total amount available	1,86,000	
	Less : Liquidation expenses	1,000	
		1,85,000	
	Less : Paid to partly secured creditors (Proceeds of property)	35,000	
		1,50,000	
	Less : Paid to preferential creditors	24,200	
		1,25,800	
	Less : Commission already paid	4,650	
		1,21,150	
	Less : Commission on amount paid to preference creditors $\frac{2}{100} \times$ Rs. 24,200	484	484
	Amount available for remuneration and remaining creditors, *i.e.*, Rs. 99,790 + Rs. 12,000 + Rs. 20,310* = Rs. 1,32,100	Rs. 1,20,666	
	As the amount is not sufficient to meet full liabilities, commission will be calculated as follows :		

* Rs 55,310 − Rs 35,000 = Rs. 20,310.

$\therefore$ Remuneration $= \frac{2}{102} \times$ Rs. 1,20,666 — 2,366

Total Commission — Rs 7,500

Final amount available for unsecured creditors is Rs. 1,20,666 —Rs. 2,366=Rs. 1,18,300.

LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

		Rs.		Rs.
Assets realised :			Liquidator's remuneration	7,500
Property	35,000		Liquidation expenses	1,000
Paid to partly secured creditors	35,000		Preferential creditors	24,200
		Nil	Unsecured creditors	1,18,300
Plant		51,000		
Stock-in-trade		39,000		
Sundry debtors		58,500		
Cash in hand		2,500		
		Rs. 1,51,000		Rs. 1,51,000

Notes : 1. Since cash in hand is included in the list for assets realised, commission of $2\frac{1}{2}\%$ is calculated on the amount including Rs. 2,500.

2. It has been assumed that freehold property has been realised by the liquidator and hence he gets commission on Rs. 35,000 also.

Illustration 177 You are required by a liquidator of a company to prepare a statement of account to be laid before a meeting of the shareholders from the following :

BALANCE SHEET OF THE COMPANY
as on date of liquidation 1-1-1964

Liabilities	Rs	*Assets*	Rs.
Share capital .		Fixed assets	4,00,000
4,000 equity shares of Rs. 100 each called up Rs. 80	3,20,000	Book debts	3,00,000
1,000 Preference shares of Rs. 100 each called up Rs 70	70,000	Loss to date	1,00,000
Secured loan from banks on *building and machinery*	1,50,000		
Trade creditors	2,60,000		
Rs.	8,00,000	Rs.	8,00,000

The assets were realised as follows: 1-4-1964, fixed assets Rs. 1,00,000, Book debts Rs. 1,00,000, expenses paid Rs. 4,000 1-6-1964, fixed assets (final) Rs. 2,00,000, Book debts Rs 1,00,000. 1-8-1964. Book debts final payment Rs. 50,000 The liquidator is entitled to 5% on collections and 2% on the amount paid to equity shareholders *Prepare the statement on the assumption that* disbursements are made in accordance with law as and when cash is available. [C. A. (Final) Nov. 1964]

Solution :

LIQUIDATOR'S STATEMENT OF ACCOUNT
from 1-1-1964 to 1-8-1964

Date	*Receipts*	Rs.	Date	*Payments*		R
1-4-64	To Realisation of book debts	1,00,000	1-4-64	By Liquidator's remuneration		5,00
				By Expenses		4,00
				By Balance c/d		91,00
	Rs.	1,00,000			Rs.	1,00,00
1-6-64	To Balance b/d	91,000	1-6-64	By Liquidator's remuneration @ 5% on 1,00,000	5,000	
	To Realisation of book debts	1,00,000		2% on 5,882	118	
	To Surplus from securities	1,50,000				5,11
				By Trade creditors		2,60,00
				By Refund of capital preference shareholders at Rs. 70 on 1,000 shares		70,00
				Equity shareholders at Rs. 1·47 4,000 shares		5,88
	Rs.	3,41,000			Rs,	3,41,00
1-8-64	To Realisation of book debts (final)	50,000	1-8-64	By Liquidator's remuneration at 5% on Rs. 50,000	2,500	
				2% on Rs. 46,569	931	
						3,431
				By Refund of capital to equity shareholders at Rs. 11·64 on 4,000 shares		46,56
	Rs.	50,000			Rs.	50,00

Illustration **178** The following is the balance sheet of M/s Unfortunat Limited as on 31st December 1974 :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Land and building	2,00,000
Authorised and subscribed		Plant and machinery	5,00,000
4,000 6% preference shares of Rs. 100 each	4,00,000	Patents	80,000
2,000 equity shares of Rs. 100 each, Rs 75 per share paid up	1,50,000	Stock at cost	1,10,000
6,000 equity shares of Rs. 100 each. Rs. 60 per share paid up	3,60,000	Sundry debtors	2,20,000
5% debentures (having a floating charge on all the assets)	2,00,000	Cash at bank	60,000
Interest outstanding on debentures (also secured as above)	10,000	Profit and loss account	2,40,000
Creditors	2,90,000		
Rs.	14,10,000	Rs.	14,10,000

On that date, the company went into liquidation. The dividends on preference shares were in arrear for two years. The arrears are payable on liquidation as per the articles of the company. Creditors include a loan of Rs. 1,00,000 on mortgage of land and building. The assets realised are as under :

Land and buildings	Rs.	2,40,000
Plant and machinery	Rs.	4,00,000
Patents	Rs.	60,000
Stock	Rs.	1,20,000
Sundry debtors	Rs.	1,60,000

The expenses of liquidation amounted to Rs. 21,800. The liquidator is entitled to a commission of 3 per cent on all assets realised (except cash at bank) and a commission of 2 per cent on amounts distributed among unsecured creditors. Preferential creditors amount to Rs. 30,000. All payments were made on 30-6-1975.

Prepare the liquidator's statement of account.

[C. A. (Inter) November 1975]

UNFORTUNATE LTD.

LIQUIDATOR'S FINAL STATEMENT OF ACCOUNT

Receipts	Rs.	Payments		Rs.
Cash at bank	[illegible]	[illegible]		33,200
Sundry debtors	[illegible]			21,800
Stock	[illegible]	[illegible]	00,000	
Patents	[illegible]	[illegible]	15,000	
Plant and machinery	[illegible]			2,15,000
Surplus from securities	1,40,000	Preferential creditors		30 000
		Unsecured creditors		1,60,000
		Preference share capital	4,00,000	
		Add : Dividend	48,000	
				4,48,000
		Equity shareholders :		
		Rs. 15 25 per share on 2,000 shares, Rs. 75 paid-up	30,500	
		Re. 0 25 per share on 6,000 shares, Rs. 60 paid-up	1,500	
				32,000
	Rs. 9,40,000			Rs. 9,40,000

Tutorial Notes

(1) Liquidator's Remuneration :

3% on Rs. 9,80,000 (including land and buildings)	29,400
2% on Rs. 1,90,000 (including preferential creditors	3,800
	Rs. 33,200

'B' List of Contributories

When a company is wound up, all persons who ceased to be the shareholders within a year before the date of winding up are placed in the 'B' list of contributories They are liable to pay the unpaid amount if the company is unable to pay the creditors. But their liability is restricted to the debts existing at the time they ceased to be members. In other words, they are not liable to contribute to the debts contracted by

the company after they ceased to be members. Their liability is contingent and arises only on the failure of the transferee members failing to pay the unpaid amounts. Again, if there is more than one such contributory, they will share the liability proportionately, subject to the maximum due on the shares.

Illustration 179 The liquidation of *X* Ltd commenced on 1st July 1978 and the assets were insufficient to pay the creditors. Unpaid amounts could not be realised from 'A' list contributories. Prepare a statement of liability of 'B' list contributories from the details given below :

Shareholders	*No. of shares transferred*	*Date of transfer*	*Debts outstanding on the date of transfer*
Ram	500	15th June 1977	Rs. 10,000
Shyam	900	15th Sept. 1977	Rs. 12,000
Madan	600	15th Nov. 1977	Rs. 15,000
Sundar	300	15th March 1978	Rs. 18,750

All the shares were of Rs. 25 each of which Rs. 15 was paid up.

Solution.

STATEMENT OF LIABILITY OF 'B' LIST CONTRIBUTORIES

Date of transfer	*Liability or incremental liability as on the date of transfer*	*Share of liability by the contributories*			*Amount payable by contributories*
		Shyam	*Madan*	*Sundar*	
15-9-77	12,000	6,000	4,000	2,000	12,000
15-11-77	3,000	—	2,000	1,000	3,000
15-3-78	3,750	—	—	3,750	Nil
	Total (*a*)	6,000	6,000	6,750	
	Amount unpaid on shares (*b*)	9,000	6,000	3,000	
	Contributions under (*a*) restricted to unpaid amount on shares (*b*)	6,000	6,000	3,000	15,000

Working Notes :

(1) Mr. Ram does not enter the 'B' list of contributories, as he effected the transfer of shares one year before (and not within) the date of commencement of winding up.

(2) Rs. 12,000 outstanding on 15-9-77 will be shared by Messrs. Shyam, Madan and Sundar in the ratio of 3 : 2 : 1 that being the ratio of their liability as 'B' list contributories.

(3) On 15-11-77 the liability is Rs. 15,000 of which Rs. 12,000 is settled as under (2). The incremental liability of Rs. 3,000 will be shared

by Madan and Sundar alone, as the debt was contracted after Shyam ceased to be a member

(4) The incremental liability of Rs. 3,750 will have to be borne by Sundar alone, as this debt was contracted after Shyam and Madan ceased to be members. However, as the unpaid amount on shares is Rs. 3,000 only and is already paid, he will not contribute anything more.

(5) As for the distribution among creditors, it will be on *pro rata* basis. It is not as if some creditors will be paid in full and some will not be paid at all.

Receiver for Debentureholders

A receiver may be appointed by the debentureholders or by the court. The terms of issue of debentures may give express power to debentureholders to appoint a receiver on the happening of a specified event. If no such power is given the court may appoint the receiver on the application made by the trustee for debentureholders or by any holder on behalf of himself and all others Such a receiver realises the amount specifically or generally charged, meets his own expenses and remunerations and makes the payment to debentureholders. If the debentures are secured by a floating charge, preferential payments must be first paid before making any payment to debentureholders. Any surplus remaining in his hands will be passed on to the company. Thus when a receiver is appointed, there will be 2 statements of accounts one prepared by the receiver and another by the liquidator.

ASSIGNMENT MATERIAL

Objective Type Questions :

I State whether the following statements are 'True' or 'False' :

(1) The preference shareholders are legally entitled to the repayment of capital in the event of liquidation of the company.

(2) The liquidator has a legal right of forfeiting the shares of those who fail to pay the amount due

(3) Preference share capital together with any arrears of dividend will have priority over the equity capital at the time of winding up

(4) Preferential creditors are treated as fully secured creditors when they can be fully paid

(5) Interest on liabilities is to be paid up to the date of actual payment in case the company is solvent and up to the date of commencement of insolvency in case the company is insolvent.

II. *Fill in the blanks :*

(1) A creditor for Rs. 10,000 holding a charge on the stock of the book value Rs. 12,000 (market value Rs. 9,000) is........

(2) The liability of a shareholder to pay the full amount of the shares held by him continues even after winding up, but he is then called as a.. ......

(3) When a company is wound up, out of the unsecured creditors some have to be paid, under the law, before others. Such creditors are known as.........

(4) In case of liquidation, the liquidators have to file a statement of the receipts and payments known as.........

(5) The first item in the order of payment to be made by the liquidator is.........

III. Indicate the correct answer :

(1) A contributory is

(*a*) a creditor

(*b*) a shareholder

(*c*) a debentureholder

(2) The salary of 4 clerks for a period of 6 months before the relevant date was in arrears. If the salary of each clerk is Rs. 1,200 per month the amount to be included in preferential creditors will be :

(*a*) Rs. 28,800

(*b*) Rs. 19,200

(*c*) Rs. 16,000

(3) The liquidator of a company is entitled to a remuneration of 2% on assets realised and 3% on the amount distributed to unsecured creditors. The assets realised Rs. 1,00,000 including cash balance of Rs. 5,000. Amount available for distribution to unsecured creditors before paying liquidator's remuneration was Rs. 43,100. The liquidator's remuneration will be :

(*a*) Rs. 3,100

(*b*) Rs. 3,140

(*c*) Rs. 3,293

Problems

1. On January 31, 1965, a compulsory order for winding up was made against *X* Company Limited, the following particulars being disclosed :

	Book value Rs.	*(Estimated to produce)* Rs.
Cash in hand	100	100
Debtors	4,000	3,600
Land and buildings	60,000	48,000
Furniture and fixtures	20,000	20,000
Unsecured creditors	20,000	
Debentures :		
Secured on land and buildings	42,000	
Secured by floating charge	10,000	
Preferential creditors	6,000	
Share capital (3,200 shares of Rs. 100 each)	3,20,000	

Estimated liability for bills discounted was Rs. 6,000—estimated to rank at Rs. 6,000. Other contingent liabilities were Rs. 12,000 estimated to rank at Rs. 12,000. The company was formed on the 1st day of January, 1965; and has made losses of Rs. 3,13,900. Prepare statement of affairs and deficiency account. (C.A.) 34·1

[Deficiency as regards creditors Rs. 24,300 ; Deficiency as regards contributories Rs. 3,44,300)

2 The following information was extracted from the books of a limited company on December 31, 1968, on which date a winding-up order was made :

	Rs.		
Ordinary share capital : 2,000 shares of Rs. 10 each	20,000	Unsecured creditors	27,000
6% Preference share capital : 3,000 shares of Rs. 10 each	30,000	Bank overdraft, secured by a second charge on the whole of the assets of the company	2,000
Calls in arrear estimated to produce Rs. 200	400	Cash in hand	120
5% First mortgage debentures secured by a floating charge on the whole of the assets of the company (interest paid to date)	20,000	Book debts —good	3,800
Creditors fully secured (value of securities, Rs. 4,000)	3,500	—doubtful (estimated) to produce Rs. 300)	800
Creditors partly secured (value of securities, Rs. 2,000)	4,000	—bad	450
Preferential creditors for wages, rates and taxes, etc.	750	Stock-in-trade (estimated to produce Rs. 6,000)	7,200
		Freehold land and buildings (estimated to produce Rs. 18,500)	21,000
		Plant and machinery (estimated to produce Rs. 6,300)	6,000
		Fixtures and fittings (estimated to produce Rs. 800)	1,200

You are required to prepare a statement of affairs of the company. (B. Com., Lucknow) 34·2

[Deficiency as regards creditors Rs. 15,230, Deficiency as regards contributories Rs. 65,030]

3. Shri Adamji Limited went into compulsory liquidation on December 31, 1960, on which date the books of account disclosed the following particulars :

	Rs.		Rs.
Equity share capital : 3,000 shares of Rs. 100 each Rs. 80 per share paid up	2,40,000	Preferential creditors for rates, taxes, etc.	5,000
5 per cent preference share capital, 2,000 shares of Rs. 100 each fully paid up, except a call of Rs 25 on 100 shares (expected to realise Rs. 1,000)	2,00,000	Unsecured creditors	1,20,000
6 per cent first mortgage debentures secured by a floating charge on all the assets of the company exclusive of uncalled capital (interest has been paid up to June 30, 1960)	3,00,000	Bank overdraft	75,000
Fully secured creditors, having a first charge on land and buildings	60,000	Liability on bills discounted Rs. 10,000 estimated to rank	4,500
Partly secured creditors, having a secured charge on land and buildings to the extent of Rs. 30,000	50,000	Bills receivable in hand (of which one bill for Rs. 5,000 is likely to be dishonoured)	15,000
		Book debts—good	1,25,000
		Book debts—bad	21,000
		Stock-in-trade (estimated to produce Rs 1,50,000)	1,20,000
		Machinery mortgaged to bank against overdraft (estimated to produce Rs. 1,10,000)	1,50,000
		Land and buildings (estimated to produce Rs.1,00,000)	1,30,000
		Cash in hand	6,000

You are required to make out a statement of affairs (*i*) as regards creditors, and (*ii*) as regards contributories. (C.A , Final, 1961) 34·3

[*Deficiency as regards creditors Rs. 1,13,500 ; Deficiency as regards contributories Rs. 5,52,000*]

4. The following information is extracted from the books of Grief Ltd on June 30, 1967, on which date a winding-up order was made :

	Rs.			Rs.
Equity share capital 20,000 share of Rs. 10 each	2,00,000	Cash in hand		2,200
6% Preference share capital, 3,000 shares of Rs. 100 each	3,00,000	Book debts :	Rs.	
Calls-in arrear (estimated to produce Rs. 2,000)	4,000	Good	37,000	
5% First mortgage debentures, secured by a floating charge on the whole of the assets of the company	2,00,000	Doubtful (estimated to produce 37½%)	8,000	
Creditors fully secured (value of shares in Gloom Ltd 40,000	35,000	Bad	4,500	49,500
Creditors partly secured (value of shares in Gloom Ltd 20,000)	40,000	Stock in trade (estimated to produce Rs. 60,000)		72,000
Preferential creditors	7,500	Freehold land and building (estimated to produce Rs. 1,95,000)		2,10,000
Unsecured creditors	2,70,000	Plant and machinery (estimated to produce Rs. 53,000)		60,000
Bank overdraft, secured by a second charge on the whole of the assets of the company	20,000	Fixtures and fittings estimated to produce Rs. 8,000)		12,000

Prepare a statement of affairs (*a*) as regards creditors ; (*b*) as regards contributories. (C.A. Final, 1968)

[*Deficiency as regards creditors Rs. 1,52,300 ; Deficiency as regards contributories Rs. 6,50,300*].

5. Given below is the position as on August 1, 1967, of Ganges Silk Mills Ltd on which date it goes into liquidation :

			Rs.
(1)	Share capital :		
(*a*)	10,000 Preference shares of Rs. 10 each fully paid		1,00,000
(*b*)	5,000 Equity shares of Rs. 10 each fully called	50,000	
	Less calls-in-arrears on 1,000 shares at Re. 1 per share	1,000	49,000
(*c*)	10,000 Equity shares of Rs. 10 each Rs. 5 per share paid		50,000
(*d*)	20,000 Equity shares of Rs. 10 each Rs. 3 per share paid		60,000
(2)	Secured loan from bank (*against pledge of stock of raw material*)		38,000
(3)	Unsecured dues : Preferential	1,200	
	Others	1,01,800	1,03,000
		Rs.	4,00,000
(4)	Cash at bank		5,000
(5)	Stock of raw material		50,000
(6)	Other stocks		1,50,000

(7) Other assets	1,45,000
(8) Profit and loss account (debit balance)	50,000
	Rs. 4,00,000

Realisations were : (*a*) Stock of raw material realised by bank Rs. 30,000 ; (*b*) Other stocks Rs. 80,000 ; (*c*) Remaining assets Rs. 20,000.

The liquidator is entitled to a fixed remuneration of Rs. 1,000 plus 3% of the gross amount realised by him. Other costs and charges amounted to Rs 11,000. Equity share capital carry the same rights regardless of the amount paid, as far as capital repayment is concerned. Show the liquidator's final statement of account. **(C. A., Final, 1967)**

[Remuneration Rs. 4,000, i.e., Rs. 1,000 fixed and 3% on Rs. 1,00,000 = Rs. 3,000 ; Calls received—on 20,000 equity shares at Rs. 5 per [illegible] *Rs. 3 per share ; Refund to pre-* [illegible] *Refund to equity shareholders on* [illegible] *are less calls in arrear Rs. 1,000 = Rs. 9,000]*

6. A. B. Co Ltd went into liquidation with the following liabilities :

(*a*) Secured creditors Rs. 20,000 (securities realised Rs. 25,000).

(*b*) Preferential creditors Rs. 600.

(*c*) Unsecured creditors Rs. 30,500. Liquidator's out-of-pocket expenses amounted to Rs. 252.

The Liquidator is entitled to a remuneration of 3% on the amounts realised (including securities in the hands of secured creditors) and 1½% on the amount distributed to unsecured creditors The various assets (excluding securities in the hands of secured creditors) realised Rs. 26,000. Prepare the Liquidator's Account showing the composition given to unsecured creditors.

(B. Com., Dibrugarh, 1971 ; B Com , Bangalore, 1978 Modified)

[Payment to unsecured creditors other than preferential creditors, Rs. 28,186 ; Remuneration Rs 1962, i e 3% on Rs. 51,000 = Rs. 1,530, 1½% on Rs 600 = Rs. 9, and 1½% on Rs 28,186 = Rs. 423]

[Hint : Remuneration on unsecured creditors other than preferential creditors has been calculated at 3/203 of Rs. 28,609]

7. Ambitions Limited went into voluntary liquidation on 31st December, 1976 Following information is available with the liquidator :

Sundry creditors amount to Rs 75,660 of which Rs. 8,000 are preferential. 6% debentures carrying floating charge on the assets amounted to Rs. 80,000. Debentureholders were paid interest up to 30-6-1976.

The assets realised as follows :

Stock-in-trade	Rs. 84,000
Plant and machinery	Rs. 60,600

Cash in hand stood at Rs. 500 Debentures were paid off [illegible] June of the following year with interest Liquidator's expenses [illegible] to Rs. 1,902 and they were entitled to a remuneration at [illegible] amount realised and 2% on the amount distributed to unsec[illegible]

Prepare liquidator's final statement of account.

(B. Com., Poona 1977)

[Liquidator's remuneration Rs. 4,338 on assets realised ; Rs. 1,060 on amount distributed to unsecured creditors. Distribution to unsecured creditors Rs. 44,840]

8. The Mysore Company Limited went into liquidation on 31st ecember 1969 with the undermentioned assets and liabilities. The capital the company consisted of 1,000 shares of Rs. 500 each.

Assets	Rs.	*Liabilities*	Rs.
ash in hand	750	Unsecured creditors	53,775
tock in trade which realised	29,600	Preferential creditors	5,295
ook debts which realised	49,200	Bank overdraft	4,000
urniture which realised	1,050	6% Debentures secured by a floating charge on the undertaking, the interest on which was paid to 30-6-1969	44,000
nvestments lodged with bankers against overdraft	4,900		

The excess amount realised by the sale proceeds of the investments were remitted by the bankers to the liquidator, debentures were paid off on 30th June 1970 together with interest to the date of winding up and a first and final dividend distributed to the creditors. The liquidator's remuneration is to be calculated at the rate of 3% on the net amount realised and 2% on the amount distributed to the unsecured creditors (*i.e.*, excluding preferential creditors). The expenses of winding up amounted to Rs. 1,014. Prepare the liquidator's final statement of account showing the rate and the amount of the final dividend payable to unsecured creditors.

(B. Com., Mysore, 1971 ; B. Com., Kerala, 1963, Modified)

[Payment to unsecured creditors, other than preferential creditors Rs. 26,888 ; Remuneration Rs. 2,983, i e., 3% of Rs. 81,500 = Rs. 2,445, and 2,102 of Rs. 27,426 = Rs. 538]

9. Hardluck Limited went into voluntary liquidation on 30-6-75. The balance sheet on that date was as follows :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Plant	25,000
3,000 equity shares of Rs. 10 each	30,000	Stock	18,000
1,500 8% preference shares of Rs. 10 each	15,000	Debtors	14,500
9% Debentures (having a floating charge)	10,000	Bank	500
Sundry creditors	18,000	Profit and loss account	15,000
	Rs. 73,000		Rs. 73,000

The liquidator realised the assets as follows :

	Rs.
Stock and plant	42,000
Debtors	19,000

Preference dividend was paid upto 30-6-1974. Preference shareholders carried the right of payment of preference dividend (in addition to capital) in arrears automatically before anything can be paid to the equity shareholders. All claims were admitted. Expenses of liquidation amounted to Rs. 2,000. Debentures were repaid on 31-12-1975 together with interest up-to-date. *Liquidator was to get as his remuneration 2% of the* amount realised and 2% on the amount paid to equity shareholders.

Prepare liquidator's final statement of account.

(B. Com., Bombay 1976)

[Liquidator's remuneration Rs. 1,220 on assets realised ; Rs. 267 on amount paid to equity shareholders. Distribution to equity shareholders Rs. 13,363]

10. The balance sheet of Kayur Limited as at 1st October, 1971, was as follows :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Fixed assets :	
Authorised, Issued and subscribed .		Freehold property	40,000
50,000, 5% cumulative preference shares	50,000	Plant and machinery	60,000
1,00,000 equity shares	1,00,000	Furniture and fittings	10,000
Secured loans :		Current assets :	
5% debentures	40,000	Stock	71,000
Current liabilities		Debtors	39,000
Sundry creditors	89,000	Bank balance	9,000
		Profit and loss account	50,000
Rs	2,79,000	Rs	2,79,000

The company passed a resolution to wind up voluntarily, and you are appointed liquidator.

The preference dividends were two years in arrear at date. The *Articles of Association contain the following clause :*

"The preference shares in the present capital shall confer on the holders the right to a fixed cumulative preference dividend of 5% per annum on the capital paid-up thereon, and shall rank both as regards dividends and capital in priority to all other shares, both present and future."

The debentures are secured on the freehold property and *interest* due on September 30, was paid.

The amount shown as creditors includes :

Rates, Rs. 1,200 ; income-tax on interest Rs. 1,850 ; compensation payable to a workman under Industrial Disputes Act, Rs. 1,000.

The freehold property realized Rs. 60,000 ; plant and machinery Rs. 42,000 ; furniture and fittings, Rs 5,500 ; stocks Rs. 54,000 ; and debtors Rs. 32,000. Liquidation cost amounted to Rs 6,000 and the liquidator's remuneration was fixed at two and half per cent on the amounts realized, plus Rs 2,000. The debentures were paid off on 31st December, 1971.

Draw up the liquidator's statement of account showing the final distribution. (C.A. Final, 1974)

(Liquidator's remuneration Rs. 5,825 ; Distribution to equity shareholders Rs. 6,175)

11 The balance sheet of a Limited company on 31-12-1976 was as follows :

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Fixed assets (including mortgaged assets of Rs. 2,500)	30,000
8% 2,000 preference shares of Rs. 10 each	20,000	Current assets	25,000
3,000 equity shares of Rs. 10 each Rs. 8 per share called-up and paid-up	24,000	Cash	2,000
Calls in-advance	1,000	Profit and loss account	18,000
6% debentures with floating charge	10,000		
Creditors (including Rs. 2,000 secured and Rs. 500 preferential)	20,000		
Rs.	75,000	Rs.	75,000

The company went into voluntary liquidation.

The amount realised from fixed assets was Rs. 23,000 (including Rs. 2,200 from the mortgaged asset). Current assets realised Rs. 14,000.

Amounts were paid off on 31-1-1977 against all the liabilities.

Liquidation expenses amounted to Rs. 200. Liquidator's remuneration is agreed at 10% of the amounts returned to shareholders against their share capital. Preference shareholders do not have a prior right as regards return of capital.

Prepare liquidator's final statement of receipts and payments. (B. Com. Gujarat, 1977)

(Liquidator's remuneration Rs. 800 ; Distribution to shareholders including calls-in-advance Rs. 8,000)

12. Mr. *X* has been appointed as liquidator of *ABC* Ltd. Balance sheet at the time of liquidation *i.e.*, 1-1-1971, is given below :

BALANCE SHEET OF *ABC* LTD

As at 1-1-1971

Liabilities	Rs.	*Assets*	Rs.
Equity share capital (Rs. 10)	2,00,000	Fixed assets	2,00,000
Debentures	1,00,000	Stock	50,000
Loans	50,000	Sundry debtors	1,25,000
Creditors	50,000	Cash	5,000
		Profit and loss account	45,000
Rs.	4,00,000	Rs.	4,00,000

Fixed assets are sold for Rs. 1,20,000 to a debentureholder holding Rs. 40,000 debentures and cash is received after set-off. Cash realised from debtors was Rs. 80,000 and the liquidation expenses amounted to

Rs. 1,000. Liquidator is paid Rs. 1,000 fixed allowance plus 2% commission on collections including cash in hand Rs. 5,000 as remuneration. Stock is sold for Rs. 10,000. Prepare the liquidator's final statement of account. (B. Com. Madras, 1972)

[*Payment to equity shareholders Rs. 9,500 ; Remuneration Rs. 1,000+Rs. 3,500, i.e., 2% of Rs. 1,75,000*]

[Hint : No remuneration has been given on Rs. 40,000 deducted by debentureholders.]

13. Balance sheet of Sona Limited as on 31st December 1975 :

Liabilities	Rs.	*Assets*	Rs.
Paid-up capital :		Fixed assets :	
1,000 6% preference shares of Rs. 100 each	1,00,000	Land and buildings	2,00,000
2,000 equity shares of Rs 100 each fully paid	2,00,000	Plant and machinery	2,20,000
3,000 equity shares of Rs. 100 each Rs. 50 paid	1,50,000	Current assets :	
Secured loans :		Stocks	1,00,000
6% Debentures (floating charge on all assets)	1,00,000	Debtors	1,00,000
Others (mortgage on land and buildings)	1,00,000	Cash at bank	30,000
Current liabilities :		Miscellaneous expenditure :	
Sundry creditors	90,000	Profit and loss account	1,00,000
Income-tax	10,000		
Rs	7,50,000	Rs.	7,50,000

The company went into liquidation on 1st January, 1975.

The preference dividends were in arrear for three years. The arrears are payable on liquidation.

The assets were realised as follows .

Land and buildings	Rs. 2,40,000
Plant and machinery	1,80,000
Stocks	70,000
Debtors	60,000

The expenses of liquidation amounted to Rs. 8,000.

The liquidator is entitled to a commission at 2% on all assets realised and 3% on amounts distributed to unsecured creditors.

All payments were made on 30th June, 1976.

Prepare liquidator's statement of account. (C. A. Inter, 1976)

[*Liquidator's remuneration Rs. 14,000 ; Distribution to equity shareholders : on 2,000 shares Rs. 1,14,800, on 3,000 shares Rs. 22,200*]

the equity shareholders having equal rights as shown below :

5,000 '*A*' equity shares of Rs. 10 each fully paid-up.
5,000 '*B*' equity shares of Rs. 10 each, Rs. 9 paid-up.
If the distribution is not proper, state the proper distribution.

(B. Com. Gujarat, 1977)

[*Distribution to equity shareholders : On 5,000 'A' equity shares Rs. 4·50 per share ; on 5,000 'B' equity shares Rs. 3·50 per share*]

15. A limited company went into voluntary liquidation with liabilities amounting to Rs. 90,000. Assets eventually realised Rs. 5,34,000. The capital of the company consisted of 30,000 preference shares of Rs. 10 each of which Rs. 7 per share was called and paid up. Holders of four-fifths of the total number of preference shares had, however, paid the full share value of Rs. 10 in advance of calls. There were also 30,000 ordinary shares of Rs. 10 each on which Rs. 9 per share had been called. Holders of one-fifth of total number of ordinary shares had, however, only paid up Rs. 8 per share, while the holders of two-fifths of the total number of ordinary shares had paid up the full Rs. 10 in advance of calls.

On the assumption that preference shares have preference only to dividends, prepare the liquidator's final account.

How would you divide the available balance among the shareholders, assuming that the cost of winding up amounts to Rs. 6,000 and that the calls-in-arrear are duly collected ? **(B. Com., Marathwada, 1972)**

[*Each shareholder, whether preference or equity, suffers Rs. 2 per share ; Return of amount is as under : Preference shareholders—on 6,000 shares Rs. 5 per share, on 24,000 shares Rs. 8 per share ; Ordinary shareholders—on 6,000 shares Rs. 6 per share, on 12.000 shares (who paid in full) Rs. 8 per share, and on 12.000 shares (who paid Rs. 9 per share) Rs. 7 per share*]

16. The Delta Co went into voluntary liquidation on 1-1-1960. The dividend on its preference shares had not been paid for 2 years.

The subscribed capital of the company was 10,000 6% cumulative preference shares of Rs. 10 each, fully paid. (They were preferential for both dividend and capital); 80,000 ordinary shares of Rs. 10 each (Rs. 6·25 per share called and paid) ; 15,000 ordinary shares of Rs. 10 each (Rs. 7·50 per share called and paid).

The assets realised Rs. 2,62,750, the cost of liquidation was Rs. 11,500 and the liabilities were Rs. 2,20,000.

Prepare the statement of account assuming the liquidator made the necessary calls, received all the money due and that the outstanding dividend was not payable. **(B. Com. Bangalore, 1972)**

(*Deficiency for preference shareholders*)	*Rs. 68,750*
Equity shareholders holding 80,000 shares will pay at Rs. 0 9211 per share	*73,688*
Equity shareholders holding 15,000 shares will receive at Rs. 0·3289 per share	*4,933*
Balance will be applied for the payment to preference shareholders	*68,755**

*The difference of Rs 5 arises since the calculation is made only upto 4 decimal places. The student may note that if the amounts are rounded off to 2 decimal places, *i.e.*, 92 paise and 33 paise, the difference will be as much as Rs. 100.

17. The share capital of Jayaram Co Ltd, which went into voluntary liquidation as on 1st April 1966, consisted of (*a*) 1,000 preference shares of Rs. 100 each Rs. 90 paid up, (*b*) 800 *A* ordinary shares of Rs. 100 each, Rs. 80 paid up, and (*c*) 1,000 *B* ordinary shares of Rs. 100 each Rs. 60 paid up. The preference shares had priority as regards repayment of capital, according to the company's articles. There were calls in advance to the extent of Rs. 2,750 received from *A* ordinary shareholders. The preferential creditors of the company amounted to Rs. 15,200, fully secured creditors to Rs. 67,000 and unsecured creditors to Rs. 43,000 of which an amount of Rs. 2,000 was to be written off as per contract, because of defects discovered in stock supplied.

The liquidator's expenses were Rs. 10,126. His remuneration was fixed at 4 per cent on realisations plus 2 per cent on the payments to unsecured creditors, subject to a maximum of Rs. 9,000. The amount realised by selling the assets was Rs. 2,20,000.

Prepare the liquidator's statement of account.

(B. Com., Andhra, 1967, Modified)

[*Remuneration Rs. 9,924, i.e., 4% on Rs. 2,20,000 = Rs. 8,800 and 2% on Rs. 56,200 = Rs. 1,124 ; Return of capital to Pref. shareholders Rs. 40 per share, i.e., Rs. 40,000 ; to 'A' ordinary shares Rs. 30 per share, i.e., Rs. 24,000 and to 'B' ordinary shares Rs. 10 per share, i.e., Rs. 10,000*]

18. The American Transport Company Ltd (in voluntary liquidation) has paid off its creditors in full, and the liquidator is in a position to make a return to the shareholders.

The position is as follows :

Share capital issued : 100 Preference shares of Rs. 10 each (fully paid)

400 Equity shares of Rs. 10 each (fully paid)

400 Equity shares of Rs. 10 each (Rs. 8 paid)

The articles of the company provide that the preference shares shall have priority over the equity shares as to repayment of capital.

[illegible] nount to Rs. 2,225, [illegible] r share on the partly [illegible] *inter se*) was duly paid except in case of one shareholder owning 100 shares.

Prepare liquidator's final statement of account. 34 4

[*Return to shareholders Rs. 975*]

19. The *X* company limited went into voluntary liquidation with the following liabilities :

	Rs.
Trade creditors	
Bank overdraft	

Capital :		
1,00,000 preference shares of Rs. 7 called		7,00,000
1,00,000 ordinary shares of Rs. 9 called	9,00,000	
Less : Calls in arears	20,000	
		8,80,000
Calls in advance received on :		
Preference shares	2,40,000	
Ordinary shares	40,000	
		2,80,000

The assets realised Rs. 20,00,000. Prepare a general liquidation account allowing Rs. 20,000 as expenses of liquidation. The preference shares have no prior rights as to refund of capital.

(B. Com., Bangalore May, 1978)

[*Each shareholder whether preference or equity suffers Re. 1 per share*]

SUGGESTED READING

1. *Accountancy*—William Pickles
2. Lectures on Company Law—Shah

ACCOUNTING
For
SPECIALIZED TYPES OF BUSINESS

37(45—130/1983)

1
Bank Accounts

This chapter has been divided into six major heads ; (*i*) Genera[l] information relating to the book-keeping system of bank ; (*ii*) Lega[l] requirements affecting the preparation of final accounts ; (*iii*) Preparatio[n] of profit and loss account ; (*iv*) Preparation of balance sheet ; (*v*) Pre[-]paration of schedule of advances ; and (*vi*) Examination questions.

I—GENERAL INFORMATION RELATING TO BOOK-KEEPING SYSTE[M]

The main aim of this chapter is to illustrate the preparation of th[e] profit and loss account and balance sheet of a bank and explain th[e] meaning and significance of certain terms which are peculiar to this typ[e] of organisation. However, in order to enable students to understand th[e] real nature of the working of a bank, a brief description of certain im[-]portant books, ledgers, and registers is given here. "*Slip system o[f] posting*" used in banks has been explained after the description of these books, ledgers and registers.

1. Books Section

Cash book. The main business of a bank is to accept cash and lend cash. Therefore, detailed records are kept for recording all tran[-]sactions relating to cash. Two cash books are kept—(*i*) *Rough cash book* ; and (*ii*) *Fair cash book.* Rough cash book is written by the cashier. There are normally two cashiers—one for receiving cash and the other for paying cash. Thus, there are two rough cash books : one maintained by the receiving cashier and the other by the paying cashier.

A rough cash book of the receiver cashier records (*i*) serial number ; (*ii*) name of the depositor, and (*iii*) the amount received When a client deposits money he pays it with the duly filled in paying-in-slip. The cashier receives money and returns the counter-foil of the paying-in-sl[ip] to the client after signing and stamping it.

While making the payment, the bank receives a token from the client given to him by an assistant to whom the client gives a cheque [illegible] [illegible] cashier records in his rough [illegible] [illegible] ; (*ii*) Name of payee ; (*iii*) A[illegible]

All paying-in-slips received by the receiving cashier and [illegible] and withdrawal forms received by the paying cashier are passed [illegible] [illegible] transactions.

Cash balance book. In this book the cash balance at the close of the day is written under the signature of the cashier and the manager.

Cash reserve book This records the cash which remains in the safe for emergency purposes.

Day book. This records daily transactions of the bank pertaining to cash transfer, clearing, etc.

II. Ledger Section

As is done in any business house, in the banks also the tsansactions are first recorded in the books and then posted to ledger. (Posting is done with the help of slip system which will be explained later in the book.) There are various types of ledgers for meeting out different purposes.

Current account ledger. This ledger contains the accounts of such customers who open current accounts in the bank. The bank, normally, does not pay interest on the bank balance, if any, maintained by the client. A charge, generally at Rs. 5 per page, is charged by the bank for maintaining the account. If overdraft is sanctioned the limit is mentioned on the top of the account. Since there are many current accounts, one for each customer, therefore, a normal branch has ten to fifteen current account ledgers. These ledgers are serially numbered.

Saving bank ledger. This ledger contains accounts of such customers who open saving bank accounts with the bank. Like current account ledgers, there are many savings bank account ledgers which are serially numbered. The account in the ledger mentions clearly the name of the customer, full address, account number.

Fixed deposit ledger. This contains the accounts of customers who have deposited money for a fixed period. At the top of the account depositor's name, his full addres, the amount of deposit, rate of interest, period of the deposit, any other instructions are mentioned. There can be more than one ledger depending upon the number of fixed deposit accounts.

Overdue fixed deposit ledger. When the fixed deposit is overdue it is transferred to overdue fixed deposit ledger.

Fixed deposit interest ledger. In this ledger the interest of every fixed deposit is entered against each depositor's name.

Loan ledger. It contains a separate account of each customer to whom a loan is granted. The amount of loan, the rate of interest, the terms of payment, nature and amount of securities are mentioned in each account.

Investment ledger. This contains account for each type of investment the bank holds. The account contains details regarding the face value of investment, amount paid on investment, rate of interest, etc.

General ledger. This is the most important ledger. It contains the total accounts of each ledger, *i.e.*, total current account, total saving bank account, total bills payable account, total loans account, total expenses account, total revenue account. Each ledger is kept on self balancing system. *This ledger contains full material for the preparation*

trial balance from which profit and loss account and balance sheet can be prepared.

III. Registers Section

For the working of a bank it is necessary that certain books and ledgers must be kept. This enables the maintenance of records on double entry system. These have been discussed in the preceding two sections. Besides, it is necessary for a bank to maintain certain registers which do not form part of double entry system.

Bills for collection register. This records the bills deposited by customers for collection. It contains information about bills, name of drawer, name of the drawee, whether payable on demand or at sight and other instructions. Bills for collection register may be divided according *to the requirements of the bank—Inward Bill for collection (IBC).* Outward Bill for Collection (OBC), Government Bill for Collection (GBC), Inward Bill Lodged (IBL), Outward Bill Lodged (OBL) and Government Bill Lodged (GBL).

Securities register. This contains a detailed record of all securities held by the bank against loans granted.

Jewellery register. This contains full details of jewellery pledged by customers against loans taken by them.

Document register This records the details of documents taken by the bank from customers against loans and advances granted to them.

Standing order register. This records the standing instructions received from customers as to periodical and other payments and collections.

Cheques dishonoured register. This contains the details of cheques returned by the bank unpaid and the reasons for dishonour.

Drafts payable register It contains the details of drafts issued by other branches for payment at this branch.

Drafts issue register. This contains the details of drafts issued by the branch payable by other branches

D.D. register. This register is used for recording the details of cheques received at the counter In other words, this records names of drawer, drawee and payee, date and amount.

Foreign letters of credit register. This contains the record of foreign letters of credit issued by the bank to its clients together with full particulars regarding licence and conditions under which it is issued by the Government.

IV. Slip System of Ledger Posting

"Slip system of ledger posting" is a method of rapid posting of books of account kept on double entry system Slips are nothing but loose leaves of journals or cash books on which transactions are recorded as *they occur. These slips (original records)* are passed on to the ledger-keeper concerned for immediate posting to the debit or credit of accounts mentioned thereon.

A bank requires to know at any time its position in relation to each individual customer and hence it is necessary that transactions must be recorded immediately after they have taken place. This would be impossible if the transactions were recorded in bound books. Thus, original cheques, paying-in-slips are used as vouchers. The cashier receiving cheques credits cash account and then passes on these cheques to the ledger-keeper for debiting the customers' accounts. Similarly, the receiving cashier debits the cash account on the basis of original paying-in-slips and then passes on these slips to the ledger-keeper for crediting the customers' accounts. In case there are no original vouchers then bank make slips called "*dockets*" for such transactions. They are used for postin purpose

This system is a good one inasmuch as it avoids the loss of time an provides an objective evidence of the records because in most of the case slips are filled in by the customers themselves. It saves the cost of pre paring slips as they are prepared by customers themselves. The syster suffers from the risk of loss, misappropriation or destruction of slips.

2 – LEGAL REQUIREMENTS AFFECTING FINAL ACCOUNT

What is a banking company ? Sec. 5 of the Banking Regulation Ac 1949, defines a banking company as any company which transacts tl business of banking in India. It further says that the word 'banking' use with reference to the above definition of banking company "means tl accepting, for the purpose of lending or investment, of deposits of mon from the public, repayable on demand or otherwise, and withdrawable b cheque, draft, order or otherwise." Therefore, any company which engaged in the manufacture of goods or carries on any trade and whi accepts deposits of money from the public merely for the purpose financing its business as manufacturer or trader shall not be deemed transact the business of banking.

Minimum paid-up capital. No banking company can carry business in India unless its subscribed capital is at least half of its autl rised capital and its paid-up capital is at least half of its subscrib capital.

Payment of commission, brokerage, etc. A banking company prohibited from paying the commission, brokerage, discount or remu ration in any form on issue of its shares in excess of $2\frac{1}{2}$ per cent of paid-up value of such shares.

Payment of dividend. No banking company can pay dividend its shares until all the capitalised expenses (including preliminary expens share-selling commission, brokerage, amounts of losses incurred, a other item of expenditure not represented by tangible assets) have be completely written off.

A banking company is however permitted to pay its dividend wi out writing off the following items :

(*i*) the depreciation in the value of its investments in approved securities where such depreciation has not actually been capitalised or otherwise accounted for as a loss ;

(*ii*) the depreciation in the value of investments in shares, debentures or bonds (other than approved securities) where adequate provision for such depreciation has been made to the satisfaction of its auditors' and

(*iii*) the bad debts, if any, where adequate provision for such bad debts has been made to the satisfaction of its auditors.

Statutory reserve. It is compulsory for every banking company to make a transfer of 20% of profit before declaring any dividend every year to reserve called 'statutory reserve'. However, if the aggregate amount of reserve and share premium account is not less than the paid-up capital, a company may be exempted from this restriction only on the leave granted by the Central Government.

Cash reserves. Banks are expected to maintain a percentage of the time and demand liabilities in cash reserves with R.B.I. The latter has the power to regulate the percentage between 3% and 15%. At present the [illegible] a minimum of [illegible] unencumbered [illegible] Ratio (S L.R.) [illegible] 40% at present.

Provision for doubtful debts and other provisions. A banking company has been put in a privileged position in that *they are not required to show in published accounts bad debts, provision for doubtful debts, and any other provision which it deems fit. They are allowed to show income after making deductions.* In the balance sheet the amount of debts (advances) is also shown at net figure arrived at after deducting the amount of bad and doubtful debts. This privilege has been granted only in view of the fact that banking companies depend very much on public confidence. In order to ensure that this confidence of public is not impaired banks have been given this privilege, namely, they are not required to disclose the provisions referred to earlier.

Provision for taxation. Like bed debts and bad debts provision, provision for tax is also not shown in accounts. It is quietly deducted from the income from interest and discounts. In the balance sheet also it is not shown separately. It is merged with current accounts and is *shown under the heading "current accounts and contingency accounts".*

3—PREPARATION OF PROFIT AND LOSS ACCOUNT

Prescribed form. This has been given in Form B of the Third Schedule. Sometimes student is required to prepare profit and loss account with imaginary figures. In order to enable him to do so [illegible] practical hints have been given in bold type. These hints are [illegible] the published accounts of Bank of India, Punjab National Bank and Bank of Baroda.

FORM OF PROFIT AND LOSS ACCOUNT

Expenditure	Practical Hints % to total	*Income*[1] *(less provision made during the year for bad and doubtful debts and other usual or necessary provisions)*	Practical Hints % to total
1. Interest paid on deposits, borrowings, etc.	54	1. Interest and discount	88
2. Salaries and allowances and P.F. (showing separately salaries and allowances to managing director, manager, or chief executive officer)	28	2. Commission, exchange and brokerage	10
3. Directors' and local committee members' fees and allowances	0·1	3. Rents	0·5
4. Rent, taxes, insurance, lighting, etc.	4	4. Net profit on sale of investments, gold and silver, land, premises and other assets (not credited to reserves or any particular fund or account)	often nil
5. Law charges	0·03	5. Net profit on revaluation of investments, gold and silver, land, premises and other assets (not credited to reserves or any particular fund or account)	often nil
6. Postage, telegrams and stamps	1	6. Income from non-banking assets, and profit from sale of or dealing with such assets	0·3
7. Auditors' fees	0·2	7. Other receipts	1
8. Depreciation on and repairs to the banking company's property	1·4	8. Loss (if any)	
9. Stationery, printing, advtt. etc.	2·2		
10. Loss from sale of or dealing with non-banking assets	—		
11. Other expenditure	1·5		
12. Balance of profit	—		
Total	100	Total	100

Salient features

1. Since provision for doubtful debts and bad debts is not shown anywhere in the published accounts, the fact is made clear on the top of credit side by giving a note that income is shown after making provision for bad debts and other usual provisions. In the absence of any such note the accounts would not show true and fair picture because it would result in the understatement of income on the one hand and concealment of loss on the other. A note to this effect, of course, does not reveal the

[1]Net loss on sale or revaluation of investments, gold and silver, land, premises and other assets, if any, are generally deducted from income.

amount deducted but admits the fact that amount has been deducted. T
helps the company in maintaining the public confidence.

silver, la
lebit side
profit and loss account but is deducted from income.

3. Salaries and allowances paid to managing director, manager chief executive officer are shown separately and are not mixed up w salaries and allowances paid to the employees of the bank.

4. It is not customary to write 'To' and 'By' in the profit and l account prepared for the banks.

5. The balance of profit and loss account is taken direct to balance sheet where it is added to the balance brought forward from previous year. From the total all appropriations are deducted.

6. Lockers' rent is income for the bank but lockers are assets a included under the heading 'furniture'. Similarly, postage stamps, e are expenses and appear on the debit side of profit and loss account "stamps in hand" is an asset.

7. **Income-tax and provision for tax.** Banks usually do not sh this item anywhere. The amount of provision for tax is quietly deduct from the income from interest and discounts and the net income is sho on the credit side of profit and loss account In the balance sheet amount of provision is added to "current accounts and contingency acc unts" without disclosing separately the amount of tax provision. Th the public is not able to know the amount of tax paid by the company profit before tax.

8. **Interest on doubtful debts.** Interest earned on doubtful debts *debited to the loan account, but is not credited to interest account, I.* not treated as income. The amount of interest is credited to a new opened interest suspense account. As and when interest is received cash a transfer is made to that extent by debiting interest suspense accou and crediting interest account. The idea behind this treatment is th income from interest should not be considered so long as there is *element of uncertainty attached to it.*

Illustration 1

While closing the books of a bank on 31st December, 1972, y find in the loan ledger an unsecured balance of Rs. 2 lakhs in the accou of a merchant whose financial condition is reported to you as bad a doubtful Interest on the same account amounted to Rs 20,000 duri the year. During the year 1973 the bank accepted 75 paise in the rup on account of the total debt up to 31st December 1972. Give the journ entries and ledger accounts to record the transactions.

[B. Com. (Hons.) Delhi, 197

Solution.

JOURNAL ENTRIES

		Rs	R
Merchant's loan account To Interest suspense account (Interest due on merchant's loan credited to interest suspense account, being loan doubtful)	*Dr.*	20,000	20,00

			Dr.	Cr.
Cash account		Dr.	1,65,000	
The Merchant's loan account				1,65,000
(Receipt of 75 paise in the rupee as under :				
Loan due	2,00,000			
Interest due	20,000			
Total due	2,20,000			
75% of Rs. 2,20,000	1,65,000)			
Interest suspense account		Dr.	20,000	
To Merchant's loan account				5,000
To Interest account				15,000
[Actual interest received being 75% of the account due (*i.e.*, 75% of Rs. 20,000=Rs. 15,000) credited to interest account and the balance cancelled by transferring to loan account]				
Bad debts account		Dr.	50,000	
To Merchant's loan account				50,000
(The balance in merchant's loan account cancelled being bad)				

Ledger Accounts

MERCHANT LOAN ACCOUNT

		Rs.			Rs.
1972			1972		
Dec. 31	To balance b/d	2,00,000	Dec. 31	By Balance c/d	2,20,000
Dec. 31	To Interest suspense account	20,000			
		Rs. 2,20,000			Rs. 2,20,000
1973			1973		
Jan. 1	To Balance b/d	2,20,000	?	By Cssh (75% dividend)	1,65,000
			?	By Interest suspense account (amount of interest not recovered)	5,000
			?	By Bad debts	50,000
		Rs. 2,20,000			Rs. 2,20,000

INTEREST SUSPENSE ACCOUNT

		Rs.			Rs.
1972			1972		
Dec. 31	To Balance c/d	20,000	Dec. 31	By Merchant's loan account	20,000
1973			1973		
?	To Merchant's loan account (amount of interest not recovered)	5,000	Jan. 1	By Balance b/d	20,000
?	To Interest account	15,000			
		Rs. 20,000			Rs. 20,000

Illustration 2

Prepare profit and loss account for the year ended 31st December, 1969 of Very Sound Bank Ltd from the following balances :

	Rs. ('000)		Rs. ('000)
Interest on loans	250	Establishments	120
Interest on savings account	150	Discount on bills discounted	40
Interest on cash credits	160	Rents	5
Interest on fixed deposits	190	Dearness allowance	35
Interest on overdrafts	50	Commission, exchange and brokerage	15
Amount charged against current account	20	Managing director's salary	15
Rebate on bills discounted	19	Contribution to provident fund	10

(I.C.W.A. Final, 1970)

Solution

Very Sound Bank Ltd.

PROFIT AND LOSS ACCOUNT

For the year ended Dec. 31, 1969

Expenditure		Rs.	*Income* (less provision made during the year for bad and doubtful debts)	Rs.
Interest paid on deposits		3,40,000	Interest and discounts	5,00,000
Salaries and allowances :			Commission, exchange and brokerage	15,000
Managing director	15,000		Other receipts	20,000
Others (establishment)	55,000			
Contribution to provident fund	10,000			
		1,80,000		
Rents		5,000		
Balance (net profit) subject to taxation		10,000		
		Rs. 5,35,000		Rs. 5,35,000

Tutorial Notes: Rebate on bills discounted Rs. 19 appears as a balance and hence entry for its adjustment must have been made. If it were an information outside the trial balance, it would have been deducted from interest and discounts

Illustration 3

From the following information, prepare profit and loss account of the Apex Bank Ltd for the year ended 31st December, 1977.

	Rs		Rs.
Interest on loan	5,18,000	Sundry charges	2,000
Interest on cash credit	5,30,000	Provident fund contribution	1,400
Discount on bills discounted	3,90,000	Directors' fees	8,400
Interest on overdraft	1,08,000	Printing	4,000
Interest on savings bank	1,36,000	Legal charges	1,800
Interest on fixed deposits	5,50,000	Salaries	1,08,000
Commission, exchange etc.	16,400	Lockers' rent	700
Rent and taxes	36,000	Transfer fees	1,400
Postage and telegrams	2,800	Depreciation	10,000

Additional information :

(1) Rebate on bills discounted Rs. 98,000

(2) Bad debts – Rs. 58,000.

(B. Com. Gujarat, 1978)

Solution

PROFIT AND LOSS ACCOUNT OF APEX BANK LTD

for the year ending 31st December, 1977

Expenditure :	Rs.	*Income* (less provision made during the year for bad and doubtful debts and other usual or necessary provisions)	Rs.
Interest paid on deposits and borrowings	6,86,000	Interest and discounts	13,90,000*
Salries, allowances and provident fund contribution	1,09,400	Commission, exchange and brokerage	16,400
Directors' and auditors' fees	8,400	Other receipts :	
Rent and taxes	36,000	Lockers' rent	700
Legal charges	1,800	Transfer fees	1,400
Postage and telegrams	2,800		
Depreciation	10,000		
Stationery and printing	4,000		
Sundry charges	2,000		
Balance of profit	5,48,100		
Rs.	14,08,500	Rs.	14,08,500

Tutorial Notes

(1) Interest on loans		Rs. 5,18,000
Interest on cash credit		5,30,000
Discount on bills discounted		3,90,000
Interest on overdraft		1,08,000
		15,46,000
Less : Rebate on bills discounted	98,000	
Bad debts	58,000	
		1,56,000
		Rs. 13,90,000

The above working is shown only for the convenience of students. This information does not form a part of published accounts.

4—PREPARATION OF BALANCE SHEET

Legal form. The legal form as given in Form A of the Third Schedule is reproduced below. In the margin, some practical hints for the preparation of imaginary balance sheet have been given in bold type. These hints are based on the published accounts of Bank of India, Punjab National Bank and Bank of Baroda.

FORM OF BALANCE SHEET

Capital and Liabilities	*Rs.* **Practical Hints % to total**	*Property and Assets*	*Rs.* **Practical Hints % to total**
1. CAPITAL (A) : Authorised capital : Shares of Rs. ...each Issued capital : Shares of Rs. ...each Amount called up at Rs. ...per share *Less* : calls unpaid *Add* : forfeited shares	**0·5 to 1**	1. CASH : In hand and with Reserve Bank and State Bank (including foreign currency notes)	**5 to 7**
		2. BALANCES WITH OTHER BANKS (SHOWING WHETHER ON DEPOSIT OR CURRENT ACCOUNT) :	**1 to 2**

2. RESERVE FUND AND OTHER RESERVES — 1 to 1·5

3. DEPOSITS AND OTHER ACCOUNTS — 75 to 82
   Fixed deposits
   Savings bank deposits
   Current accounts, contingency accounts, etc.

4. BORROWINGS FROM OTHER BANKING COMPANIES, AGENTS, ETC. — 1 to 3
   (i) In India
   (ii) Outside India
   Particulars :
   (i) Secured (stating the nature of security)
   (ii) Unsecured

5. BILLS PAYABLE — 0·5 to 1

6. BILLS FOR COLLECTION BEING BILLS RECEIVABLE — 5 to 6
   As per contra :
   (i) payable in India
   (ii) payable outside India

(i) In India
(ii) Outside India

3 MONEY AT CALL AND SHORT NOTICE : — 0 8 to 1

4. INVESTMENTS
   mode of valuation, *e.g.*, cost or market value (f)
   (i) Securities of the Central and State Governments and other trustee securities including treasury bills of the Central and State Governments
   (ii) Shares (classifying into preference, ordinary, deferred and other classes of shares and showing separately fully and partly paid up)
   (iii) Debentures or bonds
   (iv) Other investments (to be classified under proper heads)
   (v) Gold

5. ADVANCES† — 50 to 55
   (other than bad and doubtful debts for which provision has been made to the satisfaction of the auditors)
   (I) Loans, cash credits, Overdraft, etc.
   (i) In India
   (ii) Outside India
   (II) Bills discounted and purchased (excluding treasury bills of the Central and State Governments) :
   (i) payable in India
   (ii) payable outside India.

† The details and technique of preparation of the schedule of advances have been dealt with separately in Section 4 of this chapter.

7. OTHER LIABILITIES (C)	0 5 to 2·5	6. BILLS RECEIVABLE BEING BILLS FOR COLLECTION AS PER CONTRA : (*i*) payable in India (*ii*) payable outside India	5 to 6
8. ACCEPTANCES, ENDORSEMENTS, AND OTHER OBLIGATIONS PER CONTRA	10 to 12	7. CONSTITUENTS' LIABILITIES FOR ACCEPTANCES, ENDORSEMENTS AND OTHER OBLIGATIONS as per contra	10 to 12
9. PROFIT AND LOSS Profit as per last Balance sheet *Less* : Appropriations *Add* : Profit for the year brought from the Profit and loss account	0·01 to 0·1	8. PREMISES LESS DEPRECIATION (G)	0·4 to 0·5
10. CONTINGENT LIABILITIES (D)		9. FURNITURE AND FIXTURES LESS DEPRECIATION (G)	
		10. OTHER ASSETS INCLUDING SILVER (TO BE SPECIFIED) (H)	0·3 to 0·9
		11. NON-BANKING ASSETS ACQUIRED IN SATISFACTION OF CLAIMS STATING MODE (I) OF VALUATION	0·01 to 0·1
		12. PROFIT AND LOSS	
		Total	100

NOTES

"General instructions : The corresponding figures (to the nearest rupee, if so desired) for the year, immediately preceding the year to which the balance sheet relates should be shown in separate columns." —*Vide* G.S.R. 1137 dated 24-11-58 published in the Gazette of India, Pt. II–Sec. (*i*) 3 dated 6-11-58 (w.e.f. 1-12-58).

This applies to the profit and loss account.

(*A*) Capital :

(*i*) The various classes of capital, if any, should be distinguished.

(*ii*) Shares issued as fully paid-up purusant to any con without payment being received in cash should be sta separately.

(*iii*) Where circumstances permit, issued and subscribed capita and amount called up may be shown as one item, *e.g*.. issued and subscribed capital...Shares of Rs....paid up.

(iv) In the case of [illegible]

however, should not be extended to the outer column.

(B) Omitted.

(C) Under this heading may be included such items as the following :

Pension or insurance funds, unclaimed dividends, advance payments and unexpired discounts, liabilities to subsidiary companies and any other liabilities.

(D) These should be classified under the following categories :

(i) Claims against the banking company not acknowledged as debts.

(ii) Money for which the banking company is contingently liable showing separately the amount of any guarantee given by the banking company on behalf of directors or officers.

(iii) Arrears of cumulative preference dividends.

(iv) Liability on bills of exchange re-discounted.

(v) Liability on account of outstanding forward exchange contracts.

(E) Omitted.

(F) Where the value of investments shown in the other column of the balance sheet is higher than the market value, the market value should be shown separately in brackets

(G) Premises wholly or partly occupied by the banking company [illegible] of capital or revaluation of assets, every balance sheet after the first balance sheet subsequent to the reduction should show the reduced figures with the date and amount of the reduction made. Furniture, fixtures and other assets which have been completely written off need not be shown in the balance sheet.

(H) Under this heading may be included such items as the follow- [illegible] sion and brokerage on shares, interest accrued on investments but not collected, investments in shares of subsidiary companies and any other assets.

(I) Value shown shall not exceed the market value and in case where the market value is not ascertainable, the estimated realisable value.

Salient features

1. **Liquidity order.** It will be seen that the asset side of the balance sheet is arranged in the liquidity er, *i.e.*, what is the most liquid asset

is put as the first item (cash in hand) and what is less liquid is put as the second item (balance with other banks) and then still less liquid assets as the third item and so on. Thus, main headings in the liquidity order may be put as follows :

(a) Cash in hand and with Reserve Bank and State Bank.
(b) Balances with other banks,
(c) Money at call and short notice,
(d) Investments,
(e) Advances :
 (i) Loans, cash creditors, and overdrafts, etc.,
 (ii) Bills discounted and purchased,
(f) Bills receivable being bills for collection,
(g) Constituents, liability for acceptances, endorsements and other obligations,
(h) Premises,
(i) Furniture,
(j) Other assets,
(k) Non-banking assets,
(l) Debit balance of profit and loss account, if any. This appears only when all accumulated profits are exhausted.

The summary of headings on the liability side is as under :

(a) Capital
(b) Reserve fund and other accounts
(c) Deposits and other accounts
(d) Borrowing from other banks or agents
(e) Bills payable
(f) Bills for collection (it appears as sixth item on the assets side also)
(g) Other liabilities
(h) Acceptances, endorsement and other obligations (it appears as seventh item on the assets side.
(i) Profit and loss account
(j) Contingent liabilities.

(2) **"Information regarding "In India" and "Outside India".** It may be seen that only three headings on the assets side, *i.e.*, 2nd, 5th and 6th and two headings on the liability side, *i.e.*, 4th and 6th are required to be divided into subheads : In India and Outside India.

(3) **Gold and silver.** Note it very carefully that 'silver' appears under the heading 'other assets' but 'gold' is classified under the heading 'investments'. Similarly, investment in shares and debentures of other companies is classified under the heading investment but investment shares of subsidiary company are classified under the heading 'other assets'.

(4) **Contra items.** Sixth and seventh headings appearing on the assets side are repeated on the liability side where their arrangement is as sixth and eighth item respectively.

(5) **Investments.** Mode of valuing investments must always be shown, *i.e.*, whether they are appearing at cost or at market value. In the inner column the details as to quoted investments and non-quoted investments must be shown and the market value of quoted investments must appear as an information.

(6) **Appropriation.** Unlike other companies the profit and loss account on the liability side appears as a separate heading and is not included under the heading reserve fund. Also, it will be seen that details of all appropriations are shown in the inner column of the balance sheet. This leads us to the conclusion that *Profit and loss appropriation account is dispensed with in the banking companies account.*

Explanation of some terms relating to balance sheet

Money at call and short notice. This is the third heading on the assets side of balance sheet. It consists of loans (*i*) at call, and (*ii*) at short notice. These are related to inter-bank transactions. Under this arrangement money is borrowed by one bank from another bank usually [illegible]

Investments. Investments include (*i*) treasury bills issued by the Reserve Bank of India, (*ii*) Gold, (*iii*) other usual investments in government securities, and (*iv*) shares and debentures of limited companies. *Investment in shares of subsidiary companies is not included under this heading. It is classified under 'other assets'.* Mode of valuation of investments (*i.e.*, whether at cost or market value) must always be shown. They are divided into : (*a*) Quoted and unquoted investments. Market value of the quoted investments is shown in the inner column ; and (*b*) Investments in Government securities and other investments. Other investments are further shown in detail as to investment in debentures, shares, type of shares, etc.

Advances. This heading is composed of (*i*) loans, cash credits and overdrafts, and (*ii*) bills discounted and purchased. The total of the two subheads is shown in the outer column. Any bad debt, [illegible] for bad debt is not shown by deducting it in the inner column. [illegible] net amount is shown in the outer column. The details of [illegible] shown in the 'Schedule of Advances' the technique of preparation [illegible] is dealt with later in this chapter. Short loans should not be [illegible] loans. Short loans are nothing but borrowings from other banks [illegible] shown on the liability side of the balance sheet.

Cash credits, loans and bank overdraft. These [illegible] above, form one part of advances. The three terms [illegible] under :

Cash credit is an arrangement by which the bank [illegible] money up to a certain *limit.* It is not always

d be withdrawn to that extent immediately. However, the bank has eep the amount (to the extent of limit allowed) always ready under ear that money may be demanded at any time. With a view to pensate, at least to some extent, the loss of interest on idle amount, bank charges interest on the actual amount withdrawn at a little higher e than that charged on loan. Cash credit is usually on hypothecation pledge of stock. Bank quite often puts the protection clause under nich it charges interest on minimum amount (say 1/3rd of the limit) hether or not actually withdrawn.

Loan is an advance of a fixed amount to be withdrawn in lumpsum. It may or may not be secured by some assets of the borrowing company. The rate of interest on it is lower than that charged on cash credit as the bank has not to keep the amount idle. Most of the business houses prefer to take cash credit and pay interest at a little higher rate as they find it inconvenient to use the whole amount of loan immediately.

Bank overdraft. This is granted when the client has got the current account in the bank. Bank overdrafts are also granted within the *limit* fixed by the bank authorities. Interest charged on the actual overdraft is always at a higher rate than that charged on loan which is justified on the same ground advanced in favour of cash credit. It is a short period arrangement.

Illustration 4. A limited liability banking company closes its account on December 31. It is found from the books that a loan of Rs. 1,00,000 was advanced on June 30, 1973 at 5% per annum, interest payable half-yearly and that such loan was outstanding as on December 31, 1973 without payment towards principal or interest.

The security for that loan consisted of 850 fully paid-up shares o Rs. 100 each. On 30th June 1973 the said shares were quoted in th market at Rs. 202 per share. Subsequently there were fluctuations in th value of the said shares, the lowest quotation being Rs. 95 per share November, 1973. On 31st December 1973 the said shares were quoted Rs. 205 per share.

In the balance sheet of the bank as on December 31, 1973 will y classify the loan as secured or unsecured ? (Adapted from C.A. Fi

Solution. On 31st December, 1973 the amount due is Rs. 1,02 (Rs. 1,00,000 for loan and Rs. 2,500 for half-year's interest). On the s day the market value of security is Rs. 1,74,250 (850 shares at Rs. 20 share). Therefore, the loan should be classified as secured loan i balance sheet as on December 31, 1973. It is immaterial that m value of the shares was at any time only Rs. 80,750 (850 shares at per share). What is material is the value of the security as on th of balance sheet.

Bills for collection. These days a large amount of business is on with the help of banks. This becomes necessary, because th is not ready to make the payment to the seller until the goods are d to him and the seller is not ready to deliver goods until the pa received by him. Under these circumstances the remedy normally is to despatch goods to the city of buyer and hand over documen rising the delivery of goods (*i.e.*, railway receipt, lorry receipt, bill

to the bank. The bank is also handed over a bill or hundi drawn on the buyer. As per the instructions by the seller, the bank presents the bill to the customer and upon having collected the specified sum hands over the documents authorising the delivery of goods to the buyer For rendering all these services the banker charges his commission. After deducting his commission from the amount collected, the banker hands over the balance to his client.

Since this business forms a very large part of total business of the bank, it keeps a register for recording the details of all the bills received for collection purposes When bills are collected, journal entry is passed by debiting cash account and crediting client's account. Entry for the commission is also passed by debiting client's account and crediting commission account. On 31st December, when some bills are left uncollected, they are brought into account by passing an entry :

Debit Bills Receivable being bills for collection account

Credit Bills for collection being bills receivable account

The former account appears as an asset and the latter as a liability. Since these bills are still uncollected and bank has been given the authority to collect them, therefore, money on these accounts will come to the bank, hence an asset But after having collected money on these bills, it has to be handed over to the clients and hence a liability as well.

Acceptances, endorsements and other obligations The amount on this account, like that of bills for collection, also appears on the assets side as well as liability side. The proper heading under which it appears is as follows :

Assets side : "Constituents" liability on acceptance, endorsements and other obligations per contra".

Liability side : "Acceptances, endorsements and other obligations per contra".

The real meaning and logic of these terms can be found out in the facts that a seller will not like to take the risk of making the delivery of goods unless he is sure of getting the payment. The guarantee of making the payment by the buyer in his personal capacity proves worthless inasmuch as the seller cannot rely on his words Thus a normal procedure is that the buyer has to go to some reputed man for standing as surety for him One of the reputed persons, whose guarantee will be taken at its face value, is bank The bank is able to accommodate the parties in the following three ways .

(*a*) by accepting on behalf of the purchaser a bill drawn by the seller,

(*b*) by making an endorsement on a promissory note drawn by the buyer in favour of the seller, and

(*c*) by giving a guarantee to make the payment on the failure of buyer.

Since in all the above three cases bank has taken upon itself to make the payment, for all unexpired risks bank may be held liable hence it is his liability. But as his position is that of a surety, after making the pay-

ment to the seller, he gets the right of recovering the amount from the principal debtors, and hence it appears as an asset as well.

In most of the cases, bank protects itself fully by taking some security before accepting any bill or standing as guarantee for the principal debtor.

Whenever such bills are accepted, they are simply recorded in a register. On 31st December, when it is found that many bills of this nature are left undisposed, they are brought into account by passing the following journal entry :

Debit Constituents' liability for acceptances, endorsements and other obligations

Credit Acceptances, endorsements and other obligations.

(*i*) **Inland letters of credit ; (*ii*) Foreign letters of credit ; (*iii*) Forward exchange contracts ; (*iv*) Credit guarantee claim accounts** are some more examples of accounts which are included under the heading *acceptances, endorsements* and other obligations.

Contingency Account. Taxation provision is shown under this heading. The amount is usually merged with current accounts so that a reader of the balance sheet does not know the account of tax provision separately.

Bills Payable. In order to remit money, one of the means is to go to a bank and get a bank **draft, telegraphic transfer, circular note,** or cash order. The money is handed over to the issuing bank and the draft so received is sent to the payee who encashes it. The paying bank is reimbursed by the bank who issued such drafts. On the day of preparation of final accounts, if such bills remain uncashed they are taken to liability side under the heading 'Bills Payable'. Agency drafts, payable Travellers and gift cheques issued are also shown under this heading.

Cash certificates (cr. balance) call deposits payable on demand. This is included under the heading current account and is shown on the liability side of the balance sheet. It may be repeated that debit balance of cash credit is included as asset under the heading advances.

Cash certificates/call deposits payable on notice, Recurring deposits They are included under the heading fixed accounts and are shown on the liability side of the balance sheet.

Branch Adjustments. *Under the chapter* 'Branch Accounts' in Vol. I of the Advanced Accountany, Theory, Method and Application—it *has already* been stated that there are many transactions which take *place between* the head office and branch and between one branch and another branch towards the end of financial year. When such transactions occur, they are properly recorded in the books of the branch or head office where the transaction takes place but in the absence of advice or completion of transaction it remains unrecorded in the books of the other party. Because of *these* transactions there is always some balance left *in the branch account* in the head office books. This balance is called '*Branch* adjustment account.' This appears in the balance sheet *on the assets side* if it has a debit balance and on the credit side if it has a credit balance.

Rebate on Bills Discounted. This can also be called by other names as 'Discount received in anvance' or 'Unexpired discount' or 'Discount received but not earned' and its treatment is the same as that for interest

received in advance. 'Rebate on bills discounted account' like intere received in advance account is a personal account in nature and th if it appears—

(*a*) In the trial balance it is taken direct to balance sheet on t liability side under the heading other liabilities,

(*b*) under adjustments, it is to be taken to two places like any oth adjustment. One part of this is taken to the balance sheet on the liabili side and the other part is taken to the profit and loss account and deducted from the income from interest and discount. The net amou of income then is taken to the outer column of the profit and loss accour

The calculation of reba[illegible] taking one simple example. [illegible] i 3,000 for 3 months at 6% on [illegible] will be involved—

Bank will receive a bill of Rs. 3,000

Bank will earn discount at 6% for 90 days

$$i.e., \frac{6}{100} \times \frac{90}{365} \times \text{Rs. } 3{,}000 \qquad 44 \text{ (appro}$$

But this discount is for December, January and February.

Since accounts are prepared on 31st December each year, discou received for 60 days (31+29) for January and February is not actua [illegible] ed 'Rebate on bills discounte [illegible] Rs. 14·41.

Illustration 5

In respect of the following transactions of the Prosperity Bank L you are required to indicate the necessary journal entries as well as th treatment in the profit and loss account and balance sheet in respect year ended 31-12-1970 :

(*a*) The following bills were discounted at 5 per cent :

Discounted on	*Amount*	*Due date inclusiv of 3 days of grac*
	Rs.	
(*i*) 28-12-70	50,000	31- 1-71
(*ii*) 29- 7-70	1,00,000	30-11-70
(*iii*) 29-10-70	4,00,000	30- 4-71
(*iv*) 31-12-70	30,000	3- 3-71

(I.C.W.A., Final, 1971, Modifie

Solution.

Date of bill 1970	*Date of Maturity 1970-71*	*No of days afte December 31, 197*
28-12-1970	31- 1-1971	31 days
29- 7-1970	30-11-1970	—
29-10-1970	30- 4-1 71	120 days
31-12-1970	3- 3-1971	[illegible]

Amount	Rate	Total annual discount	Proportionate amount of discount
Rs.		Rs.	Rs.
50,000	5%	2,500	212[1]
1,00,000	5%	5,000	—
4,00,000	5%	20,000	6,575[2]
30,000	5%	1,500	255[3]
			7,042

[1] $\frac{2,500 \times 31}{365} = \text{Rs. } 212$; [2] $\frac{20,000 \times 120}{365} = \text{Rs. } 6,575$;

[3] $\frac{1,500 \times 62}{365} = \text{Rs. } 255.$

Journal entry :

Discount account	Rs. 7,009	
To Rebate on bills discounted account		Rs. 7,009

Rebate on bills discounted, being discount unearned, will appear on the liability side of balance sheet, discount account, to be shown on the credit side of profit and loss account, will be reduced by Rs. 7,009.

Illustration 6.

Following facts are given for your information. You are required to give journal entries for recording : (*i*) The transaction of discounting ; (*ii*) The transaction of adjusting the rebate on bills discounted, and (*iii*) The transaction of collecting the bill.

Bills discounted on 1st November, 1973 at 4% p.a. for 3 months	Rs.	90,000
Interest and discount		32,20,000

Solution :

Discount on Rs. 90,000 at 4% p.a. for 3 months

$$= \frac{4}{100} \times \frac{3}{12} \times \text{Rs. } 90,000 = \text{Rs. } 900.$$

This discount is for 3 months, *i.e.*, November, December a January. Therefore, Rs. 322·10 discount for January is received advance.

JOURNAL ENTRIES

		Rs.	R
Entry on discounting : Bills discounted and purchased account To Current account (personal account) To Interest and discount account (nominal account)	Dr.	90,000·00	89
Entry on Adjusting the rebate on bills discounted : Interest and discount account To Rebate on bills discounted account	Dr.	322·10	
Entry on collecting the bills : Cash (or other bank) account To Bills discounted and purchased account	Dr.	90,000·00	90

* When bill is discounted the amount is credited to the current account c tomers after deducting the discount.

Illustration 7.

The trial balance of the National Bank Limited as on 30th June 1976, shows the following balances :

	Rs.
(1) Interest and discounts	45,40,600
(2) Rebate on bills discounted (on 1-7-75)	4,750
(3) Bills discounted and purchased	3,37,400

The amount of unexpired discount as on 30-6-76 is Rs. 5,560.

Write necessary adjusting entries and calculate the amount of "Interest and Discount" to be credited to profit and loss account.

(B. Com. Gujarat Nov 1976)

JOURNAL OF NATIOMAL BANK LIMITED

Date			Rs	Rs.
1-7-75	Rebate on bills discounted account	Dr.	4,750	
	To Interest and discount account			4,750
30 6-76	Interest and discount account	Dr.	5,560	
	To Rebate on bills discounted			5,560

INTEREST AND DISCOUNT ACCOUNT

Date		Rs.	Date		Rs.
30-6-76	To Rebate on bills discounted	5,560	1-7-75	By Rebate on bills discounted	4,750
-do-	To Profit and loss account transfer	45,39,790	30-6-76	By Cash account and interest and discount accrued account	45,40,600
		Rs 45,45,350			Rs. 45,45,350

From the above account it is clear that an amount of Rs. 45,39,790 will be credited to profit and loss account by way of interest and discount.

Illustration 8.

The Asoka Bank Ltd. owns premises. From the following particulars relating to its accounts prepare the balance sheet as on 31st December, 1973 :

	Rs		Rs.
Authorised capital :	40,00,000	Letters of credit	5,00,000
Subscribed capital 4,00,000 shares of Rs. 10 each Rs 5 paid	20,00,000	Telegraphic transfers payable	3,00,000
Investment	70,00,000	Bank drafts	2,00,000
Bills discounted	1,50,00,000	Short loans	40,000
Profit and loss account (Cr.)	8,50,000	Rebate on bills discounted	10,000
Endorsement on bills negotiated	1,00,000	Acceptances for customers	50,00,000
Liability of customers for acceptances	50,00,000	Loans	1,00,00,000
Money at call and short notice	90,00,000	Cash credit	1,00,00,000
Cash in hand	20,00,000	Bank overdraft	10,00,000
Cash with Reserve Bank of India	40 00,000	Bills purchased	10,00,000
Cash with State Bank of India	40,00,000	Current and deposit account	5,60,00,000
Reserve	30,00,000	Investment fluctuation account	1,00,000
Circular notes	10,00,000	Bills negotiated	1,00,000

Liability on bills of exchange re-discounted amounts Rs. 3,70,000 and on account of outstanding forward exchange contracts Rs. 2,00,

Solution :

From the above partitculars students are advised to prepare the trial balance. The difference between the two sides will be treated as premises. This has been assumed because the question after having stated that the bank owns premises discloses no balance for the premises. The difference between the two sides will be Rs. 10,00,000 which has been taken as the value of permises.

Ashoka Bank Ltd
BALANCE SHEET
as at 31-12·1973

Capital and liabilities	Rs.	*Property and Assets*		Rs.
AUTHORISED CAPITAL :		CASH IN HAND AND WITH RESERVE BANK AND STATE BANK		1,00,00,000
Shares of Rs......each	40,00,000	BALANCES WITH OTHER BANKS		
SUBSCRIBED AND PAID-UP CAPITAL :		In India	—	
4,00,000 sharse of Rs. 10 each Rs. 5 paid	20,00,000	Outside India	—	
RESERVE FUND AND OTHER RESERVES :		MONEY AT CALL AND SHORT NOTICE		90,00,000
Reserve	30,00,000	INVESTMENTS at cost		
Investment fluctuation account	1,00,000	Quoted (market price)	—	
DEPOSITS AND OTHER ACCOUNTS		Unquoted	—	70,00,000
Current and deposit account	5,60,00,000	ADVANCES (other than bad and boubtful debts for which provision has been made to the satisfaction of auditor)		
BORROWINGS FROM OTHER BANKS		(*i*) Bills discounted and purchased		
Short loans	40,000	In India	—	
BILLS PAYABLE*	20,00,000	Outside India	—	
BILLS FOR COLLECTION being			1,60,00,000	
Bills receivable as per contra		(*ii*) Loans cash credit and overdraft		
Payable in India —		In India	—	
Payable outside India —	—	Outside India	2,10,00,000	3,70,00,000
OTHER LIABILITIES		BILLS RECEIVABLE being Bills for collection as per contra		
Rebate on bills discounted	10,000	Payable in India	—	
ACCEPTANCES, ENDORSEMENTS AND OTHER OBLIGATIONS as per contra**	51,00,000	Payable outside India	—	—
PROFITS AND LOSS ACCOUNT	8,50,000	CONSTITUENT LIABILITIES FOR ACCEPTANCES, ENDORSEMENT AND OTHER OBLIGATIONS as per contra (2)		51,00,000
		PREMISES		10,00,000
Rs.	6,91,00,000	Rs.		6,91,00,000

Contingent Liabilities

(*i*) On account of bills of exchange rediscounted 3,70,000

(*ii*) On account of forward exchange contracts outstanding 2,00,000

Tutorial Notes

*Circular notes÷Telgraphic transfers+Bank drafts+Letters of credit.

** Liabilities for customers for acceptances+Endorsements on bills negotiated.

Illustration 9.

The following balances are extracted from the general ledger of a commercial banking company on 31st December 1973 :

	Rs.
Reserve fund	62,50,000
Share premium	55,00,000
Dividend equalisation reserve	17,50,000
Overdue interest reserve	20,00,000
Fixed deposits	15,46,99,000
Current accounts	14,60,19,800
Savings bank accounts	5,09,16,550
Contingency accounts	6,13,80,140
Employees insurance fund	50,00,000
Borrowing from other banking companies in India	75,00,000
Unexpired discounts	89,214
Unclaimed dividends	1,20,939
Bills payable	18,42,150
Branch adjustments	30,05,498
Acceptances, endorsement and other obligations	2,49,59,150
Bills for collection payable outside India	57,10,500
Bills for collection payable in India	33,55,280
Profit and loss account	26,20,380

The authorised capital of the bank is divided into 5,00,000 shares of Rs. 100 each and 1,00,000 shares of Rs. 50 each. All the shares have been issued and subscribed for. The 1,00,000 shares of Rs. 50 each are issued as fully paid bonus shares. In respect of the shares of Rs. 100 each, Rs. 50 per share has been called-up and paid.

The bank has made no provision for future gratuities to staff, nor has it ascertained the amount of its liability.

Claims against the company are Rs. 95,230, which are disputed by the bank.

Bills of exchange re-discounted, Rs. 97,000.

Outstanding foreign exchange contracts amount to Rs. 14,35,000.

Details of profit and loss account—	Rs.
Balance on 1st January 1973	43,50,000
Profits for 1973	33,47,280
Appropriations out of profits in 1972—	
Reserve fund	5,00,000
Final dividend	25,00,000
Appropriations in 1973—	
Provision for taxation	30,00,000
Interim dividend for 1973	12,70,000
Provision for Bonus for 1973	8,06,0[illegible]

From the information given above you are required to prepare 'Capital and Liabilities' side of the Bank's balance sheet arranging the items in the serial order of the statutory form. [C.A. (Final) May 1974]

Solution

BALANCE SHEET OF COMMERCIAL BANKING COMPANY
as at 31st December, 1973
(Liabilities side only)

	Rs.	Rs.
Capital and liabilities :		
Authorised capital :		
5,00,000 shares of Rs. 100 each	5,00,00,000	
1,00,000 shares of Rs. 50 each	50,00,000	
	5,50,00,000	
Issued and subscribed capital :		
5,00,000 shares of Rs. 100 each Rs. 50 per share called and paid	2,50,00,000	
1,00,000 shares of Rs. 50 each issued as fully paid bonus shares	50,00,000	
		3,00,00,000
Reserve fund and other reserves :		
Reserve fund	69,19,456	
Dividend equalisation reserve	17,50,000	
Share premium account	55,00,000	
		1,41,69,456
Deposits and other accounts :		
Fixed deposits	15,46,99,000	
Savings bank deposits	5,09,16,550	
Current accounts and contingency accounts	20,93,99,940	
		41,50,15,490
Borrowings from other banking companies, agents, etc., in India		75,00,000
Bills payable		18,42,150
Bills for collection being bills receivable as per contra		
(i) Payable in India	33,55,280	
(ii) Payable outside India	57,10,500	
		90,65,780
Other liabilities :		
Unexpired discounts	89,214	
Branch adjustments	30,05,498	
Unclaimed dividends	1,20,955	
Employees' insurance fund	50,00,000	
		82,15,667
Acceptances, endorsements and other obligations as per contra		2,49,59,150

Profit and loss account :			
Balance as per last balance sheet		43,50,000	
Less : Appropriations			
Final dividend for 1972	Rs. 25,00,000		
Reserve fund	5,00,000	30,00,000	
		13,50,000	
Add : Profit for 1973		33,47,280	
		46,97,280	
Less : Interim dividend for 1973	12,70,900		
Transfer to reserve at 20%	6,69,456		
Bonus to staff for 1973	8,06,000		
		27,46,356	
			19,50,924
			51,27,18,617
Contingent liabilities :			
(a) Claims against the banking company not acknowledged as debts		95,230	
Bills of exchange rediscounted		92,000	
Gratuity payable to staff on retirement, amount of liability not ascertained		14,35,000	

5—SCHEDULE OF ADVANCES

The fifth heading on the asset side is that for 'Advances'. The Act requires that the published accounts of the bank should attach details of the advances either in the balance sheet itself or in a separate schedule forming part of the published accounts. The schedule of advances is divided in *nine* parts The total of the first four items gives the total advances which appear in the outer column of the balance sheet. The next five items give further details relating to the pattern of advances. They are not totalled The prescribed form together with practical hints for its preparation is given below :

SCHEDULE OF ADVANCES

Particulars	*Loans cash-credits and overdrafts* Rs	*Bills discounted and purchased* Rs	*Practical Hints**
(*i*) Debts considered good in respect of which the banking company is fully secured.	10,20,000	5,30,000	(*i*) About 75% to 90% Amount in this column is the maximum. Bank, in the course of normal practice, will like to give fully secured loan to play safe.

* These hints are to be used only when imaginary figures are to be filled in. In case facts are available, schedule is to be prepared with the help of those figures.

(ii) Debts considered good for which the banking company holds no other security than the debtors' personal security.	70,000	60,000	(ii) About 5% of the total debts. Since the security is only of the personal nature and that too only of the principal debtor, the bank does not feel safe in giving advances of this nature.
(iii) Debts considered good secured by the personal liabilities of one or more parties in addition to the personal security of the debtor.	2,10,000	1,10,000	(iii) Rest of the balance is shown here. The figure here is more than the figure shown in second item because the security here, though of personal nature, is better than that available in the above case.
(iv) Debts considered doubtful or bad, not provided for.	NIL	NIL	(iv) This figure is always nil as the bank *provides* for all bad and doubtful debts. Bank is allowed to do so without being required to disclose the fact. †The total, *i.e.*, Rs. 20,00,000 is shown in the outer column of the balance sheet.
Total Advance	13,00,000†	7,00,000†	
(v) Debts due by the directors or officers of the banking company or any of them either severally or jointly with any other persons.	30,000	—	(v) [illegible]ere write the amount [illegible] om the officers. [illegible] ormally not a [illegible] amount.
(vi) Debts due by companies or firms in which the directors of the banking company are interested as directors, partners or, in the case of private companies, as members			

(viii) Maximum total amount of advances *including* temporary advances granted during the year *to the* companies or firms in which the directors of the banking company are interested as directors, partners or in case of *private* companies as members.	3,85,700	2,80,000	(viii) The amount here always equal to or mo than the amount appea ing in (vi) above.
(ix) Due from banking companies.	1,20,300	—	(ix) It can be any figure bu usually not very high.

An alternative way of showing the schedule of advances is illustrat ed below.

Illustration 10

The trial balance of Zenith Bank Limited, made up as on 31st Dec. 1974 contains the following items :

		Rs.
(i)	Loans, cash credits and overdrafts (payable in India)	4,50,00,00
(ii)	Bills discounted and *purchased* (payable in India)	50,50,00
(iii)	Bills discounted and purchased (payable *outside India*)	50,00

You are required to show how *these items will* appear in the Balance Sheet of the bank as on 31st December 1974. Also prepare the schedule of particulars of advances as *required under the* Banking Regulation Act 1949, using imaginary figures. [C.A. (Inter) Nov. 1975]

Solution.

Balance Sheet—Assets side

			Rs.
	Advances (other than bad and doubtful debts for which *provision* has been made to the satisfaction of auditors)		
(i)	*Loans*, cash credits and overdrafts (all payable in India)		4,50,00,000
(ii)	Bills discounted and purchased ;		
	In India	50,50,000	
	Outside India	50,000	51,00,000
			5,01,00,000

Schedule of Particulars of Advances

(using imaginary figures)

		Rs.
(i)	Debts considered good in respect of which the banking company is fully secured.	4,32,50,000
(ii)	Debts considered good in respect of which the banking company holds no other security than the debtor's personal security.	7,50,000

(iii) Debts considered good secured by the personal liability of one or more persons in addition to the personal security of debtors.	61,00,00
(iv) Debts considered doubtful or bad not provided for	Nil
	5,01,00,00
(v) Debts due by directors or officers of banking company or any of them either severally or jointly with any other person	2,50,00
(vi) Debts due by companies or firms in which the directors of the banking company are interested as directors, partners or managing agents or in case of a private company as members.	Nil
(vii) Maximnm total amount of advances including temporary advances made at any time during the year to the directors or manager or officers of the banking company or any of them either jointly or severally with any other person.	6,75,00
(viii) Maximum total amount of advances including temporary advances granted during the year to companies or firms in which the directors of the banking company are interested as directors, partners or managing agents or in the case of a private company as members.	Nil
(ix) Due from banking companies	30,25,00

Illustration 11

From the books of account of Nachiketa Bank Ltd., as on 31st De 1977 the following particulars regarding loans and advances given by th Bank in India are available :

	Rs.
(i) Loans to corporate sector fully secured (excluding banks but including companies in which directors are interested)	20,00,00
(ii) Loan to Anugraha Bank Ltd—fully secured	5,00,00
(iii) Debts due by officers (excluding directors) fully secured	3,00,00
(iv) Loan to non-corporate sector—fully secured	10,00,00
(v) Loan to Vasu Bank Ltd—fully secured	5,00,00
(vi) Debt due by Mr. M. Vasant, a director of the bank —futly secured	2,00,00
(vii) Debts considered good which are unsecured	8,00,00
(viii) Debts considered good guaranteed by third parties	10,00,00
(ix) Debts due by companies in which the directors are interested, fully secured (maximum amount of debts at any time during the year Rs. 20,00,000)	10,00,0
(x) Doubtful debts	1,00,0
(xi) Provision for bad and doubtful debts	1,50,0

(xii) Maximum amount of debts due by officers and directors at any time during the year	8,00,000

You are required to show how the above items are statutorily required to be disclosed in the balance sheet of the bank.

[C.A. (Inter) Nov., 1974 Modified]

Nachiketa Bank Ltd

Schedule of Particulars Regarding Advances

		Rs.
1.	Debts considered good in respect of which the bank is fully secured	45,00,000
2.	Debts considered good in respect of which the bank holds no security other than debtor's personal security	8,00,000
3.	Debts considered good secured by the personal liability of one or more persons in addition to the personal security of debtors	10,00,000
4.	Debts considered doubtful or bad not provided for	Nil
		63,00,000
5.	Debts due by directors or officers of the bank or any of them severally or jointly with any other persons	5,00,000
6.	Debts due by companies or firms in which the directors of the bank are interested as directors, partners or managing agents, or in the case of private companies, as members	10,00,000
7.	Maximum total amount of advances, including temporary advances made at any time during the year to directors, or managers or officers of the bank or any of them severally or jointly with any other persons	8,00,000
8.	[illegible] of advances granted during the [illegible] the [illegible] aging agent or, in the case of private companies, as members	20,00,000
9.	Due from banks	10,00,000

6 - EXAMINATION QUESTIONS

Illustration 12.

The following are the balances of Karuna Bank Limited. You are requested to prepare the profit and loss account and the balance sheet as at 31st December, 1969 as per the requirements of the Banking Companies Regulation Act.

	Rs.		Rs.
Share capital : 2,000 equity shares of Rs. 500 each, Rs. 100 per share paid up	2,00,000	Cash in hand	22,654
Bad debts written off	12,871	Interest received	53,226
Reserve fund investments	1,00,000	Cash with banks	2,01,210
General expenses	18,242	Endorsements and guarantees as per contra	7,402
Current accounts	20,24,422	Owing by foreign correspondents	20,044
Interest paid	16,052	Customers' liabilities for acceptances	1,54,282
Deposit accounts	6,92,023	Short loans	6,48,206
Profit and loss account (credit)	22,934	Loans and advances to customers	15,45,670
Acceptances for customers	1,54,282	Investments	9,88,254
Discount	24,376	Bills discounted	6,22,824
Bills receivable	1,00,000	Premises	2,21,790
Endorsements and guarantee	7,402	Bills for collection	1,00,000
Commission	4,424		

The following information is relevant : 1. During the year interim dividend of Rs. 20,000 was paid ; 2. Reserve Rs. 6,438 as "Rebate on bills discounted" ; 3. Provide Rs. 15,000 for taxation reserve ; and 4. Particulars of investments and advances are not required.

(B. Com. Bombay, 1970 ; B. Com. Kerala 1972, Modified)

Solution

M/s Karuna Bank Limited

PROFIT AND LOSS ACCOUNT

For the year ended 31st December, 1969

Expenditure	Rs.	*Income (less provision made during the year for bad and doubtful debts and after usual and necessary provisions)*	Rs.
Interest paid	16,052	Interest and discount	43,293*
General expenses	18,242	Commission	4,424
Profit for the year	13,423		
	Rs. 47,717		Rs. 47,717

*Discount + Interest received − bad debts — Rebate on bills discounted — Taxation reserve.

M/s Karuna Bank Limited

BALANCE SHEET

As at 31st December, 1969

Capital and Liabilities	Rs.	*Property and Assets*	Rs.
SHARE CAPITAL :		CASH :	
Paid-up capital :		1. In hand	22,654
2,000 Equity shares of Rs. 500 each Rs. 100 per share paid.	2,00,000	2. With other banks of India	2,01,210
		INVESTMENTS :	
		1. Reserve fund investments	1,00,000

RESERVE FUND AND OTHER RESERVES :		
Statutory reserve :		
Balance as per last balance sheet (1)	1,00,000	
Add : Transferred from profit and loss account	2,685	1,02,685
DEPOSIT AND OTHER ACCOUNTS		
1. Deposit accounts		6,92,023
2. Current accounts and contingency accounts (3)		20,39,422
BORROWINGS FROM OTHER BANKS		
(Short loans)		6,48,206
Bills for collection as per contra		1,00,000
OTHER LIABILITIES :		
Rebate on bills discounted		6,438
ACCEPTANCES, ENDORSEMENTS AND OTHER OBLIGATIONS AS PER CONTRA		1,61,684
PROFIT AND LOSS ACCOUNT :		
Balance as per last balance sheet (2)	44,934††	
Less : Interim dividend paid	20,000	
	22,934	
Add : Profit for the year	13,423	
	36,357	
Less : Transferred to statutory reserve @ 20% of current year's profit	2,685	33,672
	Rs.	39,84,130

2. Other investments	9,88,254
ADVANCES : (other than bad and doubtful debts for which provision has been made to the satisfaction of the auditors)	
1. Loans, cash credits and overdafts	15,65,714
(*ii*) Bills discounted and purchased	6,22,824
BILLS RECEIVABLE BEING BILLS FOR COLLECTION AS PER CONTRA	1,00,000
CONSTITUENTS' LIABILITY FOR ACCEPTANCES, ENDORSEMENTS AND OTHER OBLIGATIONS AS PER CONTRA	1,61,684
PREMISES :	
Less : Depreciation	2,21,790
Rs.	39,84,130

TUTORIAL NOTE

(1) Since there is a reserve fund investment there ought to be a reserve fund.

(2) Profit as per trial balance+dividend paid.

(3) Includes taxation provision.

(4) Loans and advances to customers—owing by foreign corresp

Illustration 13.

The following is the trial balance of New Bank of Rajasthan Ltd. as at December 31, 1973 :

	Rs.	Rs.
Authorised capital		5,00,000
Unissued capital	2,00,000	
Uncalled capital	1,50,000	
Reserve fund (invested in Mysore Government Bonds)		3,00,000
Investment fluctuation reserve account		20,000
Bank overdrafts, loans and cash credits	4,00,000	
Bank premises	60,000	
Mysore Government Bonds (reserve fund investments)	3,00,000	
Other State Government securities	2,00,000	
Current account		6,00,000
Profit and loss account, January 1, 1973		25,000
Money at call and short notice	70,000	
Bills discounted	73,000	
Shares	17,000	
Cash in hand	1,10,000	
Cash at bank	3,00,000	
Income tax paid	9,000	
Salaries and other expenses	73,500	
Interest, discount, etc.		1,70,000
Interim dividend paid	7,500	
Deposits and savings bank accounts		3,55,000
	Rs. 19,70,000	Rs. 19,70,000

Additional information :

(*i*) The bills discounted mature at an average date of February 1974 (including days of grace). All bills are discounted at 10% p.a.

(*ii*) The market value of investments in government securities was Rs 4,75,000. Increase investment fluctuations reserve account with the necessary amount.

(*iii*) Bank added premises during the year by Rs. 10,000. Provide 5% depreciation on the opening balance.

(*iv*) Provision for taxation on 1st January stood at Rs. 15,000. It is to be increased to Rs. 28,000.

(*v*) Details of loan, cash credits and overdrafts were as under :

Amount Rs.	*Security (value as on December 31, 1973)*
1,70,000	Government security Rs. 1,80,500.
70,000	Personal security, value of personal property Rs. 1,70,000.
10,000	Shares in textiles Rs. 6,000 (Debtor is in financial difficulty).
60,000	Personal security plus security of two persons.
50,000	Gold, value Rs. 85,000.
40,000	Debentures of a company, value of security Rs. 46,000.
4,00,000	

You are required to prepare profit and loss account and balance sheet of the bank as on December 31, 1973.

(*vi*) Interest accrued on investments Rs. 750.

Solution

New Bank of Rajasthan Ltd.
PROFIT AND LOSS ACCOUNT
For the year ended December 31, 1973

Expenditure		*Income (less provision made during the year for bad and doubtful debts and other usual or necessary provisions)*	
	Rs.		Rs.
Salaries and expenses	73,500	Interest and discount	1,38,750
Depreciation, 5% of Rs. 50,000	2,500		
Net profit	62,750		
Rs.	1,38,750	Rs.	1,38,750

Tutorial Notes

		Rs.	Rs
(1) (*i*)	Rebate on bills discounted : Rs. $\frac{73,000\times50\times10}{365\times100}$ = Rs. 1,000		
(*ii*)	Interest and discount		1,70,000
	Add Accrued		750
			1,70,750
	Less : Rebate on bills discounted	1,000	
	Provision for doubtful debts (loan Rs. 10,000—shares in textiles Rs. 6,000)	4,000	
	Taxation provision (Rs. 28,000—Rs. 15,000)	13,000	
	Income tax paid	9,000	
	Investments fluctuation reserve account :		
	Mysore Government security 3,00,000		
	Other Government security 2,00,000		
	Total amount 5,00,000		
	Market value of Government securities 4,75,000		
	Fall in value 25,000		
	Less : Fund already existed 20,000		
	Additional required	5,000	
			32,000
	Amount shown in Profit and loss account		1,38,750

New Bank of Rajasthan Ltd
BALANCE SHEET
As on December 31, 1973

		Rs.			Rs.
1. *Capital*			1. *Cash*		
Authorised capital : ...Shares of Rs. ... each		5,00,000	In hand and with Reserve Bank of India		1,10,000
Issued capital : ...Shares of Rs. ... each		3,00,000			
Subscribed capital : ...Shares of ... each Rs. ... called up		1,50,000			
2. *Reserve fund and other reserves :*			2. *Balance with other banks*		3,00,000
Reserve fund	3,00,000				
Add 20% of Rs. 62,750	12,550				
		3,12,550			
3. *Deposits and other accounts :*			3. *Money at call and short notices*		70,000
Current deposits and contingency account (1)		6,38,000			
Deposits and savings bank account		3,55,000			
4. *Borrowings from other banks*		nil	4. *Investments (At cost)*		
			(i) Government securities	5,00,000	
			(ii) Shares	17,000	
			(Market value of Government securities is Rs. 4,75,000)		5,17,000
5. *Bills payable*		nil	5. *Advances* (Other than bad and doubtful debts for which provision has been made to the satisfaction of the auditors)		
			(i) Loans, cash credit and overdrafts	3,96,000	
			(ii) Bills discounted and purchased	73,000	
					4,69,000
6. *Bills for collection being bills receivable as per contra*		nil	6. *Bills receivable being bills for collection as per contra*		nil
7. *Other liabilities :* Rebate on bills discounted		1,000	7. *Constituents, liabilities for acceptances, endorsements and other obligations as per contra*		nil

8. *Acceptances, Endorsements and other Obligations as per contra*		nil	8. *Premises*	60,000	
8. *Profit and loss account*			*Less* Depreciation	2,500	57,500
Balance as per last year	25,000		9. *Furniture and Fixtures*		nil
Add Profit	62,750		*Less* Depreciation		
	87,750				
Less Interim dividend	7,500				
	80,250				
Less Transfer to reserve	12,550	67,700			
			10. *Other assets*		
			Interest accrued		750
			11. *Non-banking assets*		nil
	Rs.	15,24,250		Rs.	15,24,250

Tutorial Notes

(1) Current account Rs. 6,00,000+Additional taxation provision Rs 13,000+ Existing investment fluctuation reserve account Rs. 20,000+Additional investment fluctuation reserve account Rs. 5,000=Rs. 6,38,000.

SCHEDULE OF PARTICULARS REGARDING ADVANCES

Particulars	*Loans, cash credit and overdrafts* Rs.	*Bills discounted and purchased* Rs.
1. Debts considered good in respect of which bank is fully secured (1)	2,66,000	—
2. Debts considered good in respect of which the bank holds no other security than the debtor's personal security.	70,000	—
3. Debts considered good secured by the personal liabilities of one or more parties in addition to the personal security of the debtors.	60,000	73,000
4. Debts considered doubtful or bad not provided for.	—	—
	3,96,000	73,000
5. Debts due by directors or officers of the bank or any of them either severally or jointly with any other persons.	—	—
6. Debts due by companies or firms in which the directors of the bank are interested as directors, partners or in case of private companies as members.	—	—
7. Maximum total amount of advances including temporary advances made at any		

time during the year to directors or managers or officers of the bank or any of them severally or jointly with any other persons.	—	—
8. Maximum total amount of advances, including temporary advances granted during the year to the companies or firms in which the directors of the banking company are interested as directors, partners or in case of private companies as members.	—	—
9. Due from banks.	—	—

Tutorial Notes

(1) Rs. 1,70,000+Rs. 6,000+Rs. 50,000+Rs. 40,000.

***Illustration 14.**

The following are the balances of General Ledger of *X* Bank Limited as on 31st December 1969 :

	Rs.		Rs.
Share capital	2,50,00,000	Non-banking assets	18,000
Calls in arrear	25,000	Interest and discount (Cr.)	46,00,000
Reserve fund	1,00,00,000	Commission and exchange (Cr.)	1,32,000
Fixed deposit	6,67,50,000	Rent (Cr.)	36,000
Saving deposit	4,16,25,000	Profit on sale of investments	1,40,000
Current deposit	7,00,11,000	Profit on non-banking assets	1,000
Borrowings from banks	16,00,000	Transfer fee	100
Cash in hand	3,16,54,000	Interest (Dr.)	13,00,000
Cash with Reserve Bank	1,50,00,000	Salaries and allowances	3,07,000
Balances with other banks :		Salaries and allowances to general manager	15,000
Current	1,43,00,000	Provident fund contribution	28,500
Fixed deposit	2,00,00,000	Loss on sale of gold	42,000
Money at call and short notice	72,60,000	Directors' fees and allowances	10,700
Bills discounted	3,15,77,000	Income-tax	5,12,000
Bills payable	5,50,000	Municipal tax	5,600
Unclaimed dividend	34,000	Law charges	13,900
Outstanding expenses	1,11,000	Postage, telegrams and stamps	6,300
Profit and loss account b/f	16,16,000	Auditors' fee	3,000
Investments	4,43,21,000	Depreciation on furniture	3,600
Loans	5,03,16,000	Repairs	4,800
Premises	50,00,000	Stationery, printing and advertisement	10,000
Furniture	4,40,000	General expenses	2,700
Silver	30,000		

The analysis of current account ledger shows a credit balance of Rs. 9,12,25,000 and a debit balance of Rs. 2,12,14,000, of these debit balances Rs. 1,50,00,000 has securities fully covering such balances, Rs. 50,00,000 is granted on personal security of debtors concerned, of which again Rs. 12,40,000 involved personal security of other persons over and above those of the debtors. Rs. 2,00,000 is doubtful and Rs. 14,000 is bad and no provision has been made for these. Rs. 4,00,000 is due from a director of the bank and his debit balance was maximum on 12-10-69 at Rs. 6,00,000. Rs. 6,00,000 is due by another bank.

The loans are fully secured. Of the bills discounted bills for Rs. 2,50,11,000 are documentary bills, the value of goods under the documents bear much above the amount of the bills, while bills worth Rs. 50,10,000 bear signatures of other persons and have no other security. On bills worth Rs. 2,00,000 are signatures of some directors of the bank

and the maximum amount of such discounting during the year 1969 was Rs. 4,30,000. Bills for Rs. 20,000 are doubtful and for Rs. 10,000 are bad and should be written off. Rs. 13,26,000 of the bills are due from other banks. Rebate on bills discounted as on 31st December, 1969 amounted to Rs. 1,06,093.

The bank has customers' bills for collection of Rs. 12,00,000 and has acceptances and endorsements on behalf of customers on 31st December, 1969 amounting to Rs. 18,50,000.

The authorised capital of the bank is Rs. 5,00,00,000 divided into 5,00,000 equity shares of Rs. 100 each. All of these shares are issued and [illegible] to the extent of Rs. 50 per share. There [illegible] 1,000 shares.

You are required to [illegible] for the year ended 31st [illegible] Companies Act and a b[illegible] Form *A* of the same Act.

(Adapted from C.A. Final)

Solution

PROFIT AND LOSS ACCOUNT OF *X* BANK LIMITED
For the year ending 31st December, 1969

Expenditure	Rs.	*Income (Less provision made during the year for bad and doubtful debts and other usual or necessary provisions)*	Rs.
Interest paid on deposits, borrowings, etc.	13,00,000	Interest and discount	44,63,907*
Salaries and allowance (including Rs. 15,000 to general manager)	3,22,000	Commission, exchange and brokerage	1,32,000
Contribution to provident fund	28,500	Rent	36,000
Directors fees and allowance	10,700	Net profit on sale of investments, gold and silver, land, premises and other assets	98,000+
Local committee members fees and allowance	—	Net profit on revaluation of investments, gold, silver, land, premises and other assets	—
Rent, taxes and insurance	5,600	Income from non-banking assets	1,000
Law charges	13,900	Other receipts (transfer fee)	100
Postage, telegrams and stamp	6,300		
Auditor's fees	3,000		
Repairs to bank property	4,800		
Depreciation on furniture	3,600		
Stationery, printing, advertisement, etc.	10,000		
Loss from sale of or dealing with non-banking assets	—		
Other expenditure	2,700		
Balance being net profit—subject to taxation	30,19,907		
Rs.	47,31,007	Rs.	47,31,007

Tutorial Note

(1) *Interest and discount Rs*		46,00,000
Less Bad debts	10,000	
,, Doubtful debts	20,000	
,, Rebate on bills discounted	1,06,093	1,36,093
Balance shown in the profit and loss account		44,63,907

(2) Profit on sale of investments Rs. 1,40,000 – Loss on sale of gold Rs. 42,000 = Rs. 98,000.

BALANCE SHEET OF *X* BANK LIMITED

As on 31st December, 1969

Capital and Liabilities		Rs.
Capital		
Authorised capital		
5,00,000 Equity shares of Rs. 100 each		5,00,00,000
Issued capital		
5,00,000 Equity shares of Rs. 100 each		5,00,00,000
Amount called up at Rs 50 per share		2,50,00,000
Less Calls in arrear		25,000
		2,49,75,000
Reserve fund and other reserves		
Reserve fund		1,00,00,000
Deposits and other accounts		
Fixed deposit		6,67,50,000
Saving bank deposit		4,16,25,000
Current accounts and contingency accounts		9,12,25,000*
Borrowings from other banks, agents, etc.		
In India	16,00,000	
Outside India	—	16,00,000
Bills payable		5,50,000
Bills for collection being bills receivable		
As per contra		
Payable in India	12,00,000	
Outside India	—	12,00,000
Other liabilities		
Unclaimed dividend		34,000
Rebate on bills discounted		1,06,093
Outstanding expenses		1,11,000
Acceptances endorsement and other obligations		
As per contra		18,50,000
Profit and loss account :		
Balance	16,16,000	
Less Income tax[2]	5,12,000	
	11,04,000	
Add Profit for the year	30,19,907	
		41,23,907
		Rs. 24,41,50,000

Property and Assets		Rs.
Cash in hand and with Reserve Bank		4,66,54,000
Balance with other banks		
On fixed deposit		
In India	2,00,00,000	
Outside India	—	
On current account		
In India	1,43,00,000	
Outside India	—	
		3,43,00,000
Money at call and short notice		72,60,000
Investments (at cost)[1]		4,43,21,000
Advances		
(Other than bad and doubtful debts for which provision has been made during the year to the satisfaction of auditors)		
Loan, cash credit and overdraft		
In India	7,15,30,000*	
Outside India	—	
Bills discounted & purchased		
In India	3,15,47,000†	
Outside India		
		10,30,77,000
Bills receivable being bills for collection		
As per contra		
In India	12,00,000	
Outside India	—	
		12,00,000
Constituents' liabilities for acceptances, endorsements and other obligations		
As per contra		18,50,000
Premises		
Less Depreciation		50,00,000
Furniture		
Less Depreciation		4,40,000
Other assets		
Silver		30,000
Non-banking assets		
Acquired in satisfaction of claims		18,000
		Rs. 24,41,50,000

Tutorial Notes

1. Details of investments are to be given in the schedule.
2. It has been assumed that the tax is of the previous year.

* Current deposit, in the trial balance Rs. 7,00,11,000 have been arrived at after deducting the debit balance of Rs. 2,12,14,000 from the total credit balances of Rs. 9,12,25,000. In order to know the picture clearly the total credit balances have been shown on the liability side (*i.e*, Rs. 7,00,11,000+Rs. 2,12,14,000 =Rs. 9,12,25,000) and debit balances have been added to loans, cash credit and overdrafts. The amount of loans etc. has been arrived at as under :

		Rs.
Amount as per trial balance		5,03,16,000
Add Debit balances (which have been added on the liability side also)		2,12,14,000
		Rs. 7,15,30,000

		Rs.
† Bills discounted		Rs. 3,15,77,000
Less Bad debts	Rs. 10,000	
,, Doubtful debts	20,000	30,000
Shown in the balance sheet		3,15,47,000

SCHEDULE OF PARTICULARS OF ADVANCES

Forming Part of the Balance Sheet

As at 31st December, 1969

		Rs.
(i)	Debts considered good in respect of which the bank is fully secured	9,03,27,000
(ii)	Debts considered good for which the bank holds no security other than the debtors' personal security	62,86,000
(iii)	Debts considered good secured by the personal liabilities of one or more parties in addition to the personal security of the debtor	62,50,000
(iv)	Debts considered doubtful or bad, not provided for	2,14,000
	Rs	10,30,77,000**
(v)	Debts due by the directors or officers of the bank or any of them either severally or jointly with any other person	6,00,000‡
(vi)	Debts due by companies or firms in which the directors of the bank are interested as directors, partners or in case of private companies, as members	
(vii)	Maximum total amount of loans including temporary advances made at any time during the year to directors or managers or officers of the company or any of them either severally or jointly with other persons	10,30,000‡‡
(viii)	Maximum total amount of loans, including temporary advances granted during the year to the companies or firms in which the directors of the bank are interested as directors, partners or in case of private companies as members.	
(ix)	Due from banks.	19,26,000*

** Table showing calculation of amount.

	Debts fully secured Rs	*Secured on personal liability of debtor* Rs.	*Secured on personal liability of debtors and other persons* Rs.	*Bad and doubtful debts not provided for* Rs.
(i) Loans as per trial balance	5,03,16,000	—	—	—
(ii) Debit balance of current account of Rs 2,12,14,000	1,50,00,000	47,60,000	12,40,000	2,14,000
(iii) Bills discounted given in the trial balance after writing off bad and doubtful debts Rs 30,000, i.e., Rs. 3,15,77,000—30,000 =3,15,47,000	2,50,11,000	15,26,000	50,10,000	—
Rs.	9,03,27,000	62,86,000	62,50,000	2,14,000

		Rs
‡ Current account debit balance		4,00,000
Add Bills		2,00,000
	Rs.	6,00,000
‡‡ Current account debit balance		6,00,000
Add Bills		4,30,000
	Rs.	10,30,000
* Current account debit balance		6,00,000
Add Bills		13,26,000
	Rs.	19,26,000

ASSIGNMENT MATERIAL

Objective Type Questions :

I. State whether the following statements are 'TRUE' or 'FALSE' :

(1) Subscribed capital of a banking company should not exceed half of the authorized capital and the paid-up capital should not exceed half of the subscribed capital.

(2) A banking company should transfer 20% of its profits to a statutory reserve, only till such reserve together with share premium account balance equals the paid-up capital.

(3) A banking company cannot pay dividend on its shares until it writes off all capitalised expenses such as preliminary expenses, brokerage and commission on issue of shares, etc.

(4) A banking company cannot grant any loans or advances on the security of its own shares.

(5) The total of bank's advances comprises of loans, cash credits, overdrafts and money at call and short notice.

(6) In a bank's balance sheet gold is shown under 'Other assets' whereas silver is shown under 'Investments'.

(7) Banks do not make a provision for bad debts, as they secure or insure all their advances.

(8) 'Rebate on bills discounted' is a liability and is, therefore, shown under the heading 'Other liabilities' by banks.

II. Under what heading will you show the following items in the balance sheet of a banking company. Give your answers in the brackets provided :

1. Unclaimed dividend (......)
2. Bills discounted (......)
3. Rebate on bills discounted (......)
4. Government of India bonds (......)
5. Demand drafts (......)
6. Telegraphic transfers (......)
7. Letters of credit (......)
8. Employees' security deposits (......)
9. Building acquired in satisfaction of a claim (......)
10. Interest accrued on investments (......)

III. Fill in the blanks :

1. When interest on doubtful debts is realised the amount is debited to......account and credited to......account.

2. The basis for recording bank transactions are the......prepared by customers and sometimes bank staff.

3. Bills for collection will appear on......of the bank's balance sheet.

4. Compulsory deposits made by tax payers are to be shown on.....of the bank's balance sheet.

5. Banks are required to transfer......of their profits to a statutory reserve.

IV. Indicate the correct answer :

1. Banks prepare the accounts for
   (a) the calendar year
   (b) the financial year
   (c) the Diwali year
2. Banks show provision for income-tax under the head
   (a) Contingency account
   (b) Other liabilities
   (c) Contingent liabilities
3. The heading 'Other assets' does not include
   (a) Silver
   (b) Gold
   (c) Library books
4. Rebate on bills discounted is
   (a) an item of income
   (b) income received in advance
   (c) an asset

5. A non-banking asset is
   (a) an item of office equipment
   (b) bank premises
   (c) secured property acquired from defaulting borrowers.

Questions

1. Explain the following terms : (a) Money at call and short notice (b) Rebate on bills discounted ; (c) Cash credit ; (d) Letter of credit (e) Circular notes. **(I.C.WA., January, 196**

2. The balance sheet of a Banking Company is to be drawn up i the form set out in the Banking Companies Act Prepare a *balance she with imaginary figures* in the set form or as nearthereto as possible. A regards particulars of 'Advances' show either in the balance sheet itself c in a separate schedule. **(I.C.W.A., July, 196**

3. How are the following items treated in the profit and loss acco unt and balance sheet of a banking company ? (a) Provision for bad ar doubtful debts, and (b) Rebate on bills discounted ?

(I.C.W.A., India, Final, January, 196

4 Draw up a proforma skeleton balance sheet of a banking com any with imaginary figures showing the prescribed particulars regardi "Advances". No detailed balance sheet is required.

(I.C.W.A., India, Final, July, 196

5. Draw up a skeleton balance sheet of a banking company accordance with the provisions of the Banking (Regulation) Act, 19 showing your knowledge of such provisions in the said Act as (a) Cont items, (b) Classification of advances, (c) Classification of investmen and (d) Non-banking assets.

(No full and agreed balance sheet is required.)

(I.C.W.A., India, Final, July, 19

6. Enumerate the details to be given in a bank balance sheet respect of the following :

(a) Advances, and (b) Investments.

(I.C.W.A., India, Final, January 19

7. Differentiate between :

(a) Bills for collection, (b) Clean bills purchased, (c) Advan against bills for collection ; and (d) Documentary bills purchased.

(I.C.W.A., India, January, 19

8. Discuss the special treatment to be given to any three of following items in respect of the final accounts of a bank :

   (a) Interest on doubtful debts,
   (b) Bills accepted on behalf of customers,
   (c) Income-tax and provision for income-tax,
   (d) Bad debts and provision for bad debts.

(I.C.W.A., Final, July, 1

9. (*a*) State particulars of advances required to be disclosed in the balance sheet of a banking company in accordance with Banking Companies Act and Rules.

(*b*) State also the different accounts which are shown under advances in balance sheet of a banking company.

(I.C.W.A., India, Final, January 1972)

10. Write short notes on any three of the following items which are usually found in a bank's balance sheet:

(*a*) Circular notes and letters of credit; (*b*) Endorsements on bills negotiated: (*c*) Acceptances on behalf of customers; (*d*) Rebate on bills discounted; (*e*) Customer's liability for acceptances; (*f*) Customer's liability for endorsements; (*g*) Investments.

(Indian Institute of Bankers, Part, II 1968)

11. Prepare a schedule of the particulars required to be given under the heading "Advances" in the balance sheet of a banking company.

(B. Com. Bombay 1967)

12. Considering the provisions of Banking Regulations Act, 1949, affecting the presentation of final accounts and the practice followed by banks, prepare with imaginary figures only the liability side of the balance sheet as at December 31, 1968 of Good Luck Bank Limited, having its registered head office at Bombay and branches all over India.

(C.A, Final, 1970)

Problems

1. Explain the follwing items appearing in the balance sheet of a bank:

(*i*) Rebate on bills discounted; (*ii*) Cash credits and overdraft; (*iii*) Endorsements and guarantees per contra; and (*iv*) Customer's liability for acceptances. **[B.Com. (Hons.) Delhi, 1972]**

2. Which of the following items *cannot* be included under the heading investments:

(*a*) Gold; (*b*) Investment in shares of *X* Ltd: (*c*) Investment in shares of *Y* Ltd—a subsidiary company; (*d*) Silver: (*e*) Treasury bills; (*f*) Investment in debentures of Ahmad Ltd—they are quoted on the stock exchange; (*g*) Investments in debentures of Dharmasi Ltd—they are quoted on the stock exchange: (*h*) Non-banking assets; (*i*) Investment in Government securities. [(*c*); (*d*), (*h*)]

3 Where will you classify the following items: (*a*) Short loans: (*b*) Cash at bank (*c*) Cash in hand; (*d*) Cash with Reserve Bank of India; (*e*) Cash with State Bank of India.

4. State in which books would the following transactions of a bank

be recorded and explain with the help of journal entries, how should their double entry be completed.

(*i*) Navin Patel paid Rs. 2,000 cash in his current account.

(*ii*) Paresh Parikh credited a dividend warrant of Rs. 250 in his current account.

(*iii*) A bill of Rs 10,000 was discounted for a bank's customer Jayesh Desai and Rs. 200 was deducted towards discount.

(B. Com. Gujarat April 1977)

5. In the books of a bank there was an amount of Rs 1,00,000 due from a customer as on 31st December 1975. The loan was unsecured and the position of the customer financially was not satisfactory. Interest accrued for the year was Rs. 5,000.

The customer was declared insolvent on 5th February 1976, and the bank was able to collect at 80 paise per rupee.

Give the entries to be recorded in the bank's books for the years 1975 and 1976. **(B. Com., Gujarat April 1976)**

(Bad debts Rs. 21 000)

6. Prepare revenue account in respect of World Bank, incorporated under the Indian Companies Act, 1956, from the following balances as on 31st December, 1970. The Management decides to make a provision of Rs. 1,00,000 for bad and doubtful debts

Dr. Balance	Rs. (in '000)	*Cr. balances*	Rs. (in '000)
Interest paid on deposits	210	Interest received	400
Salaries other than managing director's	150	Commission received	300
Allowance to employees other than managing director	70	Brokerage	150
Stamps	5	Discount	210
Advertising	15	Exchange	180
Printing and Stationery	48	Rent	110
Postage and telegrams	24	Misc. Receipts	150
Interest on borrowing	250		
Managing director's salary	36		
Allowances of managing director	12		
Directors allowance and remuneration	20		
Local committee fees and allowance	10		
Rent	40		
Taxes	30		
Depreciation written off on bank property	30		
Repairs to bank property	20		
Loss on sale of Govt. Securities	5		
Misc. expenses	25		
Balance	500		
	Rs. 1,500		Rs. 1,500

(I.C.W.A., Final, 1971)

(Net profit Rs. 4,00,000 ; Total of profit and loss account Rs. 14,00,000)

7. Under the present Banking Regulation Act it is required to state certain particulars under the major head "Advances" appearing on the assets side of the balance sheet.

In the case of Indian Banking Organisation there appeared in the balance sheet on the assets side "Advances" as under :

	Rs.
Loans to customers	50,00,000
Cash credits and overdrafts	75,00,000
Local bills discounted	25,00,000
	Rs. 1,50,00,000

State the required particulars of the total sum of Rs. 1,50,00,000 *with assumed figures against each head of the particulars.*

(Indian Institute of Bankers, Part II, 1968)

8. Two jute merchants, Mr. P.M.. and Mr. R.R. borrow from the Commercial Bank Limited, Simla, on June 1, 1962 a sum of Rs. 3,00,000 on their joint and several promissory notes depositing as collateral security, Jute valued at Rs. 9,00,000. How will this loan appear in the bank's balance sheet on 30th June, 1963 ?

They are charged interest at 6% p.a. with yearly rests. The jute is valued at *Rs. 6,98,880 on June 30, 1964. How will this loan appear in* the bank's balance sheet on June 30, 1964 : *(a)* If Mr. P.M. becomes insolvent on September 30, 1963, while M.R. remains solvent ; and *(b)* If both become insolvent on September 30, 1963 ?

(C.A. Final, 1965) 26 9

9. *Following facts have been taken out from the records of* Adarsha Bank Ltd., in respect of the year ending December 31, 1977 :

(a) On 1-1-77 Bills for collection were Rs. 7,00,000. During 1977 Bills rece [illegible] and bills collected were Rs. [illegible] were Rs. 5,50,500. Prepare [illegible] Collection (Liability) A/c.

(b) On 1-1-77, Acceptances, Endorsements, etc., not yet satisfied amounted to Rs. 14,50,000. During the year under question, acceptances, endorsements, guarantee, etc. amounted to Rs. 44,00,000. Bank honoured acceptances to the extent of Rs. 25,00,000 and clients paid off *Rs. 10,00,000 against the guaranteed liability.* Clients failed to pay Rs. 1,00,000 which the Bank had to pay. Prepare the "acceptances, endorsements and other obligations A/c." as it would appear in the general ledger.

(c) It is found from the books, that a loan of Rs. 6,00,000 was advanced on 30-6-77 at 10 per cent p.a., interest payable half-yearly ; but [illegible]

value was Rs. 98, as per the Stock Exchange [illegible] 77. But, due to fluctuation, the price fell to Rs. 60 per share in October 77. On 31-12-77, the price as per Stock Exchange rate was Rs. 82 per share. State how you would classify the loan as secured/unsecured in the Balance Sheet of the Company.

(*d*) The following balances are extracted from the Trial Balance as on 31-12-77 :

	Dr Rs.	Cr. Rs.
Interest and discounts		98,00,000
Rebate for Bills discounted		20,000
Bills discounted and purchased	4,00,000	

It is ascertained that the proportionate Discounts not yet earned for bills to mature in 1978 amounts to Rs. 14,000. Prepare ledger accounts.

(C.A. May 1978)

[*(a) Bills for collection Rs 18,99,500 ; (b) Acceptances, endorsements, etc , Rs. 22,50,000 ; (c) Secured loan : (d) Interest and discounts Rs. 98,06,000*]

10. On 31st December, 1970, the following balances stood in the books of Citizen Bank Limited., after preparation of its profit and loss account :

	Rs.		Rs.
Share capital (authorised and issued)—70,000 shares of Rs. 100 each Rs. 50 paid	35,00,000	Short loans	49,00,000
Reserve fund (under Sec. 17)	24,50,000	Bills discounted and purchased	42,00,000
Fixed deposit accounts	66,50,000	Bills payable	56,00,000
Savings bank deposits	2,10,00,000	Loans, overdrafts and cash credits	4,90,00,000
Current accounts	5,60,00,000	Unclaimed dividends	2,10,000
Money at call and short notice	21,00,000	Sundry creditors	2,10,000
Investments (at cost)	2,10,00,000	Bills for collection	9,80,000
Profit and loss account (credit), 1st January, 1970	14,70,000	Acceptances and endorsements on behalf of customers	14,00,000
Dividend for 1969	3,50,000	Bills receivable	9,80,000
Premises (after depreciation up to 31-12-70 Rs. 11,55,000)	79,45,000	Net profit for 1970 (after deducting provision for bad and doubtful debts Rs. 2,10,000, provision for taxation Rs. 7,00,000 and rebate on bills discounted Rs. 35,000)	16,80,000
Cash in hand	4,20,000		
Cash with Reserve Bank	1,05,00,000		
Cash with other banks	91,00,000		

Prepare balance sheet of bank, along with the 'Schedule of Particulars regarding Advances' (using imaginary figures), in the prescribed form as on 31st December, 1970. **[B.Com. (Hons.) Delhi, 1971, Modified]**

[*Balance sheet total Rs. 10,64,35,000*]

Hints : (*i*) Prepare trial balance. It will be seen that tax provision Rs. 7,00,000 has already been included in some credit balance. It has been assumed that it has been included in current account.

(*ii*) Rebate on bills discounted Rs. 35,000 will appear on the liability side and doubtful debts Rs. 2,10,000 will be subtracted from advances.

11. From the following trial balance of a bank prepare the balance sheet :

	Rs.		Rs.
Share capital, 2,000 shares of Rs. 100 each	2,00,000	Bills purchased	15,00,000
Premises	2,00,000	Acceptances for customers	5,00,000
Rebate on bills	5,000	Loans	22,00,000
Travellers' cheques	2,00,000	Reserves	3,00,000
Deposits	56,00,000	Depreciation fund	10,000
Money at call	8,00,000	Cash in hand	1,00,000
Profit and loss account credit balance	45,000	Cash at bank	9,00,000
Investments	7,00,000	Pension fund	40,000
		Due from customers for acceptances	5,00,000

(B.Com., Kerala, 1973, Modified)
[*Balance sheet total Rs.* 68,90,000]

12. The Indian Bank Limited showed the following balances as on December 31, 1967 :

	Rs.		Rs.
Paid-up capital	20,00,000	Stamps and stationery	10,000
Bills discounted	18,00,000	Cash in hand	5,00,000
Reserve fund	7,70,000	Cash with Reserve Bank	13,00,000
Cash credits	20,00,000	Branch adjustments (*Dr*)	1,70,000
Overdrafts	8,00 000	Investments on December 31, 1968	9,50,000
Unclaimed dividend	10,000	Loans (*Cr.*)	12,00,000
Loans	46,00,000	Recurring deposits	10 00,000
Current and savings bank deposits	38,00,000	Fixed deposits	20,00,000
Furniture	40,000	Cash certificates	10,00,000
Profit and loss account (*Cr*)	2,20,000	Contingency reserve	1,70, 000

The bank holds securities for debts amounting to Rs. 52,00,000 and personal security of one or more parties for the balance of book deb s Debts due by directors amounted to Rs. 2,30,000 and the doubtful debts were Rs. 70,000.

The rebate on bills discounted amounted to Rs 10,000. Credit has been taken for Rs. 39,900 as interest on doubtful debts The bank's acceptances on behalf of customers were Rs 6,50,000.

Prepare the balance sheet of the bank as on December 31, 1967

(B Com., Andhra, 1970, Modified
[*Balance sheet total Rs. 1,28,20,000*

Hints. 1. Credit balance of profit and loss account is Rs 1,75,100 It has been arrived at after deducting the rebate on bills discounted Rs 10,000 and interest on doubtful debts Rs. 39,900

2. Interest on doubful debts is credited to interest suspense accour and is added to contingency reserve account The figure of this accoun now stands at Rs. 2,09,900.

3. Doubtful debts Rs. 70,000 will appear in the schedule of advance in the fourth column. If it were provided Advances on the assets side and profit and loss account on the liability side both would have been reduced by Rs. 70,000. Total of the balance sheet would have been less by this amount.

4. Cash certificates and recurring deposits are part of fixed deposits

13. The following is the balance sheet of Myur Nagari Bank Ltd as on 31st December 1977 :-

	Debit Rs.	*Credit Rs.*
Share Capital		6,00,000
Reserve fund		9,00,000
Cash with Reserve Bank	16,00,000	
Balance with other Banks	13,30,000	
Fixed Deposits		50,00,000
Demand rafts		... 1,75,000
Borrowings from Banks		... 1,60,000
Current account		... 40,01,100

Cash in hand	... 6,65,400	
Bills payable		... 2,30,000
Money at call	... 7,26,000	
Bills discounted (due on 14th March on Average discounted at an average rate of 15%)	... 31,57,700	
Advance payment of Income Tax	... 2,07,500	
Savings account		... 38,10,900
Investments	... 4,32,100	
Loan	... 50,31,600	
Premises	... 5,00,000	
Furniture	... 44,000	
Silver	... 1,70,000	
Gold	... 13,200	
Non-banking Assets	... 1,81,500	
Profit and Loss account		... 5,67,729
Stationery Stock	... 1,52,000	
Branch Adjustments	... 11,77,000	
Rebate on discounted Bills (dt. 1.1.1977)		... 70,521
Interest accrued on investment	... 1,27,250	
	... 1,55,15,250	... 1,55,15,250

You are required to prepare revised Profit and Loss account and Balance Sheet of the Bank after taking into consideration the following further information :

(1) Market value of non-banking assets Rs. 1,77,500.

(2) Bills receivable for collection as on 31-12-77 Rs. 1,77,855.

(3) Acceptances, endorsements and other obligations as on 31-12-1977 Rs. 2,67,567.

(4) No credit has been taken for Interest accrued on investment Rs. 7,500.

(5) Depreciation to be provided : Premises Rs. 25,000, Furniture Rs. 4,400.

(B.Com Saurashtra, April 1978)

14. From the following balances of the Commercial Bank Limited as on December 31, 1967, prepare profit and loss account and balance sheet : The Authorised Capital consists of 20,000 shares of Rs. 100 each. The whole capital has been subscribed but only 50 per cent has been

called up. The Bank has accepted Rs. 2,00,000 worth of bills (without consideration) on behalf of customers, the securities lodged against these amounting to Rs. 3,00,000. Provide Rs. 8,000 for depreciation on buildings, Rs. 3 500 on furniture, Rs. 25,000 for investment reserve fund and Rs. 20,000 by way of bad debts reserve. An *interim* dividend at the rate of 7 per cent per annum was paid for the half-year ending 30th June, 1967. Profit as per previous balance sheet was Rs. 1,80,333. In the item of interest, exchange, etc., is included a sum of Rs. 5,900 for rebate on bills discounted.

	Rs.		Rs
Paid-up capital	10,00,000	Cash at head office and branches	4,16,324
Buildings (cost Rs. 3,00,000)	2,05,000	Furniture and fixtures (cost Rs. 50,000)	37,280
Balance of profit and loss appropriation account (on 1st Jan., 1967)	40,333	Fixed deposits	58,98,554
Advertising	1,650	Interest, exchange, etc	3,12,223
Current account	34,12,829	Investments (at cost)	2,76,125
Cash with other banks	16,05,125	Investments (reserve fund)	35,000
Directors and auditors' fees	5,930	Loans to customers	50,00,000
		Stamps on hand	189
Liabilities for expenses	46,894	Rent, taxes and insurance	8,507
Cash credits and overdrafts	34,00,520	Reserve fund	2,65,000
Postage and telegrams	1,156	Salaries	52,150
Unexpired insurance	437	Reserve for bad debts, etc.	40,000
Printing and stationery	3,390		

(B. Com., Nagpur, 1969 ; B. Com., Bombay, 1972) 26 4

[*Net profit Rs. 1,76,990 . Balance sheet total Rs. 1,10,71,500*]

15. The balances extracted from the books of Indian Banking Corporotion Limited on December 31, 1965 were as follows :

	Rs.		Rs
Paid-up capital	10,00,000	Furniture	20,000
Local bills discounted	9,00,000	Fixed deposits	20,00,000
Reserve fund	3,85,000	Profit and loss (*Cr*)	1,10,000
Cash credits and overdraft	14,00,000	Stamps and stationery (in hand)	5,000
Unclaimed dividends	5,000		
Loans	23,00,000	Cash in hand	2,50,000
Current and saving deposits	25,00,000	Cash at bank	6,50,000
		Investment at cost	4,75,000

Out of the total debts, debts for Rs. 2,85,000 were doubtful and the rest were considered good. Out of the debts considered good, Rs. 24,00,000 were fully secured and for debts amounting to Rs. 4,00,000 (including Rs. 1,15,000 due by a director) the bank held personal securities of one or more persons in addition to the personal security of the debtors and for the rest the bank held no securities other than the debtors' personal security.

The directors require the bank's investments to be shown in the balance sheet at market value which is Rs 5,25,000

The authorised capital of the bank is Rs 12,00,000. Prepare [illegible] sheet as on 31-12-1965, showing intelligently your acquaintance [illegible] requirements of the Banking Regulation Act in the aforesaid [illegible]

(B Com, Marathwada, 1971 ; B Com, Kanpur, 19[illegible]

Bangalore, 1972, 73 ; B Com, Mysore, 1[illegible]

Na

[*Balance sheet* [illegible]

16. From the following ledger balances of Laxmi Bank Limited prepare the profit and loss account and balance sheet as on 30th June, 1970 :

	Rs.		Rs.
Share capital 12,500 ordinary shares of Rs. 100 each	12,50,000	Amount added to staff retirement fund	3.000
Reserve fund	6,00,000	Premises account—amount written off	22,500
Current accounts and deposits	77,31,450	Interest, discount and commission	2,44,500
Acceptances on behalf of customers	12,00,000	Cash in hand and with Reserve Bank of India	15,84,750
Profit and loss account (balance)	15,300	Money at call and short notice	2,74,250
Interest accrued and paid	25,500		
Government securities	6,00,000	Bills discounted	3,79,500
Other securities	8,25,000	Loans and advances	46,65,000
Shares and stock	6,37,500	Premises and furniture	3,37,500
Current expenditure, salaries, rent, etc.	71,250	Freehold and leasehold property	1,80,000

Make provision for rebate on bills discounted Rs. 2,450.

(B. Com., Poona 1975 ; B. Com., Mysore, 1971 ; B. Com., Osmania, 1971) 26·6

[Profit Rs. 1,19,800 ; Balance sheet total Rs. 1,09,19,000, Difference in trial balance Rs. 2,35,500 (Dr.)]

17. The following is the trial balance of Dhanpati Bank Ltd. as on December 31, 1971 :

	Rs.		Rs.
Loans, cash credits and overdrafts	2,85,000	Subscribed capital : 50,000 equity shares of Rs. 10 each fully paid	5,00,000
Premises	50,000		
Indian Government securities	4,00,000	Reserve fund	2,50,000
Salaries	28,000	Current deposits (including call deposits on demand)	1,00,000
General expenses	27,400		
Rent, rates and taxes	2,300	Fixed deposits (including cash certificates)	1,25,000
Directors' fees	1,800		
Stock of stationery	8,500	Saving bank deposits	50,000
Bills purchased and discounted	46,000	Profit and loss account (1-1-1971)	16,000
Interim dividend paid	17,000	Interest and discount	1,28,000
Shares	50,000	Recurring deposits	20,000
Cash in hand and with Reserve Bank	1,93,000		
Money at call and short notice	80,000		
	Rs. 11,89,000		Rs. 11,89,000

The following information should be considered : (1) Provision for bad and doubtful debts is required amounting to Rs. 5,000 ; (2) Interest accrued on investments was Rs. 8,000 ; (3) Unexpired discount amounts to Rs. 380 ; (4) Interim dividend declared was 4 per cent actual ; (5) Endorsements made on behalf of customers totalled Rs. 1,15,000 ; (6) Authorised capital was 80,000 equity shares of Rs. 10 each ; (7) Rs. 10,000 were added to the premises during the year. Depreciation at 5 per cent on the opening balance is required ; (8) Market value of India Government securities was Rs. 3,90,000.

Prepare profit and loss account for the year ended December 31, 1971 and balance sheet as at that date in the prescribed forms.

(B Com., Poona, 1972) 26·7

[Net Profit Rs. 69,120 : Balance sheet total Rs. 12,28,500]

18. From the following particulars you are required to perpare the balance sheet of South East Bank Ltd as on December 31, 1971 :

	Rs		Rs.
Authorised capital	1,00,00,000	Rebate on bills not due	50,000
Subscribed capital 4,00,000 shares of Rs 20 each, Rs 5 paid	20,00,000	Advances to customers	2,00,00,000
		Cash credit (*Dr*)	20,00,000
Government securities at cost	40,00,000	Endorsements on bills negotiated	1,00,000
Shares and debentures	30,00,000	Reserves	30,00,000
Bills discounted	1,00,00,000	Cash certificate	60,00,000
Bills purchased	50,00,000	Cash orders	30,000
Premises	10,00,000	Recurring deposits	1,00,00,000
Saving bank deposits	20,00,000	Call deposits payable on demand	1,40,00,08
Compulsory deposits (Income-tax payers) payable account	10,00,000	Call deposits payble on notice	2,50,00,000
Acceptances for customers	8,00,000	Drafts payable	70,000
Travellers cheques issuable account	12,00,000	Cash in hand	1,00,00,000
Compulsory deposits (employees) payable account	20,00,000	Money at call and short notice	90,00,000
		Profit and loss account	8,50,000
		Cash credit (*Cr.*)	10,00,000

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[*Balance sheet total Rs. 6,91,00,000 ; Acceptances, endorsements, etc , Rs. 51,00,000 ; Bills payable Rs. 1,00,000 ; Fixed deposits Rs. 4,10,00,000, Current accounts Rs. 1,50,00,000*]

19. From the following information (appearing in trial balance) prepare profit and loss account of Thrifty Bank Ltd. for the year ended December 31, 1968 :

	Rs.		Rs.
Interest on loans	2,59,000	Interest on current accounts and on call deposits payable on demand	42,000
Interest on fixed deposits including interest on cash certificates and call deposits payable on notice	2,75,000	Rent and taxes	18,000
		Interest on overdrafts	1,54,000
Rebate on bills discounted, Dec.31, 1968	49,000	Directors fees	3,000
		Auditors fees	1,200
Commission	8,200	Interest on saving bank deposits	68,000
Establishment	54,000		
Rebate on bills discounted Jan 1, 1968	46,000	Postage and telegrams	1,400
		Printing and stationery	2,900
Discount on bills discounted	1,00,000	Sundry charges	1,700
Interest on cash credits	2,23,000		

Bad debts to be written off amounted to Rs. 40,000 Provision for taxation may be made at 55% (C A Final, 1970, Modified) 26·11

(*Net profit Rs. 1,27,350 ; Interest and discount after provision for bad debts and taxation Rs. 5,86,350 ; Provision for tax Rs. 1,55,650*)

20. From the following balances of the Model Bank Ltd, Bombay as on 31st December 1977 prepare the Balance Sheet as on 31st December 1977 and Profit and Loss Account for the year ended on that date :

	Rs.
Equity Share Capital in Rs. 100 shares	20,00,000
Profit and Loss Account as on 1-1-1977 (Cr.)	80,666
Current Deposit Accounts	68,25,658
Fixed Deposit Accounts	77,91,108
Savings Bank Accounts	51,36,000
Directors' fees	9,960
Audit fees	2,000
Furniture (Cost Rs. 1,00,000	7[illegible]
Interest and discount	4[illegible]

Commission and exchange	2,04,000
Investment Reserve Fund	70,000
Branch Adjustments (Cr.)	93,788
Postage and Telegrams	2,312
Printing and Stationery	6,780
Rent and taxes	17,014
Provident Fund Contribution	20,000
Salaries and allowances	1,04,300
Building (Cost Rs. 6,00,000)	4,10,000
Law charges	3,300
Cash in hand and with Reserve Bank of India	16,32,648
Cash with other banks	24,10,250
Investments at cost	17,56,250
Loans, cash credits and overdrafts	1,40,00,000
Bills discounted	28,01,040
Unexpired insurance	874
Stamps in hand	378
Statutory Reserve Fund	1,30,000
Reserve Fund	4,00,000
Contingency Reserve	1,00,000

Following additional information is available :

(*a*) The Authorised Share Capital consists of 40,000 equity shares of Rs. 100 each all of which have been subscribed but only 50% has been called up.

(*b*) The Bank has accepted Rs. 4,00,000 worth bills on behalf of the customers, the securities lodged against which amount to Rs. 6,00,000.

(*c*) Provide depreciation on Buildings Rs. 16,000 and on furniture Rs. 7,000. Provide for doubtful debts—Rs. 3,980.

(*d*) Rebate on bills discounted amount to Rs. 11,800.

(*e*) The market value of investments amounted to Rs. 17,00,000.

(B. Com. Poona, April 1978 Modified)

[*Net profit Rs. 4,20,000 ; Total of balance sheet Rs. 2,34,59,020*]

SUGGESTED READING

1. Banking Regulation Act, 1949
2. *Accountancy*—William Pickles
3. Disclosure in financial statements of banks—Discussion paper issued by IASC

2

Insurance Company Accounts

This chapter aims at explaining the technique of preparing the final accounts of Life Insurance and General Insurance business. The chapter has been divided into five major heads :

(*i*) Commercial and legal background of insurance business.

(*ii*) Books maintained by insurance companies.

(*iii*) Explanation of special terms peculiar to insurance business.

(*iv*) Accounts of Life Insurance business.

(*v*) Accounts of General Insurance business.

(*i*) Commercial and legal background of insurance business

Insurance is essentially a method of averaging risks. Several people exposed to a particular type of risk contribute small amounts to an insurance fund from which the unfortunate who actually suffer the risk are compensated. Depending on the type of risk, there are several types of insurance. Risks of fire are covered by fire insurance. Goods, vessels and freight exposed to marine risks are covered by marine insurance, losses by theft are covered by burglary insurance, risks due to employment in the form of accidents or death are covered by workmen's compensation insurance and so on. Life insurance takes two forms. In the case of an [illegible] on the attainment [illegible] Whereas, in the [illegible] e exact the nominee [illegible] on the death of the [illegible] f insurance. Other [illegible] are contracts of indemnity, whereas life insurance is a [illegible] of life insurance is that apart from the fact it covers the risk, it is also a form of investment and an investment that is increasingly preferred because of the tax incentives. Under Section 80C of the Income-Tax Act, premium paid for life insurance can be deducted from total income subject to certain limits.

Contracts of Insurance. Persons wishing to cover the risks should enter into contracts of insurance with the insurance company. The

insurance company is known as the insurer and the person taking the policy from the insurance company is known as insured. Under the contract of insurance the insurer undertakes to indemnify the insured for any loss suffered by him due to specified risks. The document containing the terms of contract is known as a policy. The sum for which the insurance is taken is known as the amount of policy. For this promise of the insured, the insurer provides consideration in the form of premium. In the case of fire and marine insurance contracts, the policy is taken for one year and premium has to be paid again only if the contract is renewed. In the case of life insurance premium will have to be paid regularly till the policy matures.

All and sundry cannot enter into contracts of insurance. For example *A* cannot insure the life of *B* who is a total stranger. But if *B* happens to be his wife or his debtor or business manager, *A* has insurable interest and therefore he can take out a policy on the life of *B*. For every type of insurance contract presence of insurable interest is insisted upon since in the absence of such interest the contract will amount to a wagering contract.

"Under ordinary law of contract there is no positive duty to tell the whole truth in relation to the subject matter of the contract. There is only the negative obligation to tell nothing but the truth. In a contract of insurance, however, there is an implied condition that each party must disclose every material fact known to him." This is because all contracts of insurance are contracts of *uberrimae fidei* i.e., contracts of utmost good faith. This is because the insurer can assess the risk and determine the premium chargeable, only on the basis of the information provided in the proposal form by the insured. (A person becomes insured only after the insured agrees to indemnify the risk, and therefore at the proposal stage, technically he can only be called a proposer.) Therefore, the proposer must make a full and frank disclosure of all material facts in an accurate manner.

(II) Books maintained by Insurance Companies

Under the Insurance Act 1938 it is obligatory on the part of all insurance companies including the general insurance companies to maintain the following books which may be called 'statutory books'

1. The registrar of policies—This book contains the following particulars in respect of each policy issued :

(*a*) The name and address of the policyholder

(*b*) The date when the policy was effected

(*c*) A record of any assignment of the policy.

2. The register of claims—This book should contain the following particulars in respect of each claim :

(*a*) The date of claim

(*b*) The name and address of the claimant

(*c*) The date on which the claim was discharged.

(*d*) In the case of a claim which is rejected, the date of rejection and the ground for rejection.

3. **The register of licensed insurance agents**—This book should contain the following particulars in respect of each agent :

(*a*) Name and address of every insurance agent appointed
(*b*) The date of appointment
(*c*) The date on which appointment ceased, if any.

In addition to the statutory books mentioned above, insurance companies also maintain the following subsidiary books for recording the transactions :

(*i*) Proposal register
(*ii*) New premium cash book
(*iii*) Renewal premium cash book
(*iv*) Agency and branch cash book
(*v*) Petty cash book
(*vi*) Claims cash book
(*vii*) General cash book
(*viii*) Agency credit journal
(*ix*) Agency debit journal
(*x*) Lapsed and cancelled policies book
(*xi*) Chief journal
(*xii*) Commission book
(*xiii*) Agency ledger
(*xiv*) Policy loan ledger
(*xv*) General loan ledger
(*xvi*) Investment ledger

(*iii*) Explanation of special terms peculiar to insurance business

Nature of business of an insurance company is different from that of a manufacturing, a trading or a banking company. Because of this, types and sources of expenses and incomes of such a company are different from those usually found in other business concerns. In order to explain these incomes and expenses some new terms are used. It is thus necessary for a student to understand these terms first.

Claims. The business of an insurance company is to cover the risk of the insured for a consideration called premium. If the risk falls on the insured then he makes a claim on the insurance company. This is the [illegible] account. Claim is [illegible] after adjusting it in [illegible] be noted that it is [illegible] which is important for revenue account. In order to calculate the loss on account of claim the claim outstanding at the end is added and claim outstanding in the beginning is deducted. It should be noted that in keeping with the convention of conservatism, the claim intimated is taken at par with the claim intimated and accepted but not paid. Thus while calculating the claim outstanding at the end the claim intimated as well as the claim intimated and accepted both are considered. The adjustment entry required for this will be as follows :

Debit claims account

Credit claims intimated and accepted but not paid account

Credit claims intimated but not accepted and paid account

At the commencement of the next period a reverse entry is passed, so that when these claims intimated are paid, they may-not influence the claims account of next year. However, if the company rejects any claim, such amount should be transferred to the insurance fund account and not to the claims account.

Illustration 1. From the following you are required to calculate the loss on account of claim to be shown in the revenue account for the year ending 31st December, 1969.

Claims :

Intimated in	*Admitted in*	*Paid in*	*Rs.*
1968	1968	1969	15,000
1969	1969	1970	10,000
1967	1968	1968	5,000
1967	1968	1969	12,000
1969	1970	1970	8,000
1969	1969	1969	1,02,000

Claim on account of reinsurance was Rs. 25,000.

Solution

	Rs.
Total claim paid in 1969 : Rs. (1,02,000+12,000+15,000)	1,29,000
Less Outstanding in the beginning, *i.e.*, intimated in 1968 or earlier whether accepted in 1968 or accepted in 1969 (Rs. 15,000+Rs. 12,000)	27,000
	1,02,000
Add Outstanding at the end, *i.e.*, intimated in 1969 whether accepted in 1969 or in 1970 (Rs. 10,000+Rs. 8,000)	18,000
	1,20,000
Less Reinsurance claim	25,000
Claims to be shown in revenue account	Rs. 95,000

Tutorial Notes : 1. It may be seen that the column for 'admitted in' is useless for calculating loss on account of claim. This is a mere information.

2. No. 3 item 'intimated in 1967, admitted in 1968, paid in 1968 Rs. 5,000' is useless as the amount paid in 1968 is not included in the amount paid in 1969.

Bonus in reduction of premium. In all the cases of general insurance the policy is always taken for one year and it is to be renewed after the expiry of the policy. Whether the policy is renewed with the same company, or a fresh policy is taken with some other company, it is a standing practice that the company usually grants a reduction in premium at

the prescribed rate if the insured has not made any claim. This rate of reduction increases every year for usually three years if the insured does not make any claim continuously year after year. For example, The New Great Insurance Company allows the following rates of reduction for motor cycle : 1st year 15%; 2nd year 25%; 3rd year 30%. This reduction is called bonus in reduction of premium. In fact this transaction should be divided into two parts—first the total premium (without any reduction) should be assumed to be received and then reduction granted should be assumed to be paid separately. Thus total premium (without reduction) should be treated as income and bonus which is subtracted should be treated as an expense. Thus—

If net premium received is	126	and
Bonus in reduction of premium is	14	

the revenue account on the credit side will show Rs. 140 (Rs. 126+Rs 14) as income and on the debit side Rs. 14 as an expense. The Journal entry is :

Debit Bonus in reduction of premium account
Credit Premium account

Reversionary Bonus In the case of life policies with profits, policy holders are given the right to participate in the profits of the business [illegible] profits of L.I.C. by [illegible] against the future premiums due from the policy-holders or it can be paid on the maturity of the policy, together with the policy amount. Bonus paid in the end along with the policy amount is called reversionary bonus.

Re-insurance. Sometimes the insurer considers a particular risk too much for his capacity and ma re-insure a part of the risk with some other insurer. Such an arrangement between two insurers is referred to as re-insurance In such a case the first insurer cannot retain all the premium on the policy for himself. Depending on the share of risk undertaken by the second insurer, proper share premium must be ceded by the [illegible] to be [illegible] will have to be shown in the accounts of both the insurers. In the accounts of the first insurer amount of claim recovered from the second insurer has to be deducted from the total claim payable by him Similarly, the premium ceded to the second insurer has to be deducted from the total premium received. In the accounts of the second insurer, claims paid include claims paid on account of reinsurance and premiums received include premium received on reinsurance business

Commission on reinsurance ceded/accepted. The business of [illegible] company is fetched through its agents who are paid commission [illegible] to the amount of business they are getting for the company. [illegible] pany gets reinsurance business it has to pay commission to [illegible] company This commission is called 'commission on reinsurance [illegible] ted' and is shown as an expense in the revenue account. [illegible]

rance ceded' and is a gain to the company surrendering the business. It appears on the credit side of revenue account.

Reserve for unexpired risk.[1] This is in the nature of a provision for claims that may arise in respect of policies which are subsisting on the date of balance sheet. Since premium has already been received in respect of such policies provision must be made for the claims that may arise out of such policies. Insurance business is peculiar in that the premium is received in advance but the risk can arise on any day. In general insurance the policy is issued for a year which means the risk is covered for a year. Chances of the risk covered occurring do not come down proportionately with the passage of time. For example, if on the balance sheet date the unexpired period of a particular policy is one month (eleven months having expired) we cannot say that the risk on the policy is reduced to 1/12th of the total risk. Even on the last day of the policy company's risk is as high as it was on the day the policy was issued. Therefore, insurance companies must provide for the risks associated with all such policies for which the premia has been received and the policies are still in force. Thus a large portion of the premia collected must be kept in reserve for unexpired risk. Keeping in view the nature of the business, the Executive Committee of the General Insurance Council (which has been set up under the Insurance Act to supervise general insurance companies) has laid down that in the case of marine insurance the provision for unexpired risk should be 100% of the net premium and in the case of other businesses (like accident, fire, theft, etc) the provision should be 50% of the net premium. The provision made on the balance sheet date will be shown on the debit side of the revenue account instead of subtracting from premia. The balance of provision also appears in the balance sheet on the liabilities side under the heading 'balance of funds and accounts'. This provision will be transferred to the credit side of next year's revenue account. Thus in the revenue account the balance of the previous year appears on the credit side and the balance provided for the current year appears on the debit side.

Additional reserve for unexpired risk. In a particular year the management may feel that the percentage of premia recommended by the General Insurance Council is not sufficient to meet the unexpired risks. In such a situation they may provide additional reserve. Such additional reserve will also be debited to the revenue account. The balance will be shown in the balance sheet as in the case of normal reserve, and will be transferred to the credit of next year's revenue account. If in the problem given, there is no instruction regarding additional reserve it means no such reserve is required. As the provision of additional reserve is the discretionary right of the management it is not correct to carry forward such reserve even though there is no instruction about it in the problem.

ACCOUNTS OF LIFE INSURANCE BUSINESS

Nationalisation of Life Insurance Business. In 1956 life insurance business was nationalised by transferring all such business to the Life Insurance Corporation established for the purpose. The main objects of nationalisation were :

[1]This items is peculiar to general insurance business only.

(1) To ensure absolute security to the policy-holder in the matter of life insurance protection,

(2) To spread insurance much more widely and in particular to the rural areas, and

(3) As a further step in the direction of more effective mobilisation of public savings.

Some of the important provisions of the Act which are worth noting are stated below

(1) Section 30. The corporation has the exclusive privilege of carrying on life insurance business in India.

(2) Section 37. All the contracts for assurance executed by the corporation are guaranteed as to payment in cash by the Central Government.

(3) Section 6. Functions of the Corporation

(*a*) The general duty of the corporation is to carry on life insurance business whether in or outside India and to develop the life insurance business to the best advantage of the community.

(*b*) In addition the corporation has the power

(*i*) To carry on capital redemption business, annuity certain business or reinsurance business,

(*ii*) To invest the funds of the corporation,

(*iii*) To acquire, hold and dispose of any property for the purpose of its business, and

(*iv*) To advance or lend money upon the security of any movable or immovable property or otherwise.

(4) Sections 14, 18 and 20. The central office is located at Bombay and has zonal offices at Bombay, Calcutta, Delhi, Kanpur and Madras. In each zone there are divisional offices and branches.

The general superintendence and direction of the corporation affairs is carried on by an executive committee consisting of not more than 5 members. The investment committee advises the corporation in matters relating to investment of funds. This committee can have a maximum of 7 members of which 3 must be members of the corporation.

As per Section 4 the corporation consists of not more than 15 members appointed by the Central Government and one of them nominated will act as the chairman. Under section 20 the corporation can have one or more managing directors. They are whole-time officers exercising such powers and performing such duties as may be entrusted to them by the executive committee or the corporation.

(5) Section 24. The corporation has its own fund and all receipts are credited to such fund and all payments are made therefrom

(6) **Section 25.** The accounts of the corporation are to be audited by duly qualified auditors. The auditors are required to submit their report to the corporation and also forward a copy of their report to the Central Government. Auditors are appointed by the corporation with the previous approval of the Central Government.

(7) **Section 26.** There must be an actuarial valuation at least once in every two years and the corporation must submit the report to the Central Government.

(8) **Section 27.** At the end of each financial year the corporation is required to prepare and submit a report to the Central Government giving an account of its activities during the previous financial year and also an account of the planned activities for the next financial year.

(9) **Section 28.** Ninety-five per cent (or a higher percentage approved by the Central Government) from actuarial valuation made under section 26 shall be allocated to or reserved for the policy-holders of the corporation and the remainder either paid to the Central Government or utilized for such purposes and in such manner as the Government may determine.

(10) **Section 28A** In the case of profits arising from business other than life, such profits after making provision for reserves and other matters are to be paid to the Central Government.

(11) **Section 29.** The Central Government has to place before Parliament a copy of the Auditors Report (Sec. 25), a copy of the actuaries report (Sec. 26) and a copy of the Report of the Corporation (Sec. 27).

Types of policies. As stated earlier, under a contract of life insurance an insurance company guarantees to pay a fixed sum of money to the insured on his attaining a certain age or to his nominees or legal heirs on his death. The contract in its written form is called a policy and broadly there are two types of policies. They are (1) whole life policy and (2) Endowment policy. Under whole life policy the insured does not get the amount during his life time. The amount is paid only to his nominees or heirs on his death. In the case of Endowment policy the amount is paid to the insured on his attainment of a specified age or if he dies before, the amount is paid to his nominees or heirs. As explained later life insurance company ascertains the profits once in two years. 95% of such profits are distributed to policy-holders as bonus. Such bonus is to be credited only to 'with profit policies'. The holders of 'without profit policies' have no right to the bonus. Naturally the premium is comparatively less in the case of 'without profit policies' than in the case of 'with profit policies'. In recent years the reversionary bonus has been around Rs. 20 per thousand sum assured per annum on Endowment policies and Rs. 25 per thousand sum assured per annum on whole life policies.

Annuity Business. Life insurace companies also do annuity business. Annuity refers to fixed annual payment made by the insurance company to the insured on his attaining a specified age. The insured deposits lumpsum amount by way of consideration for the annuity granted. This is a method under which the person purchasing the annuity receives back his money with interest. Annuity paid represents an expenditure of the life insurance business and the consideration received for annuities is an item of income.

Surrender Value. In the case of life policy, the policy normally has value only when it matures. But to facilitate the promotion of business, insurance companies assign value to the policy on the basis of the premium paid. Insurance companies will be prepared to pay such value on the surrender of the policy by a needy policy-holder desiring to realise the policy. Therefore the value is referred to as 'surrender value'. Surrender value is usually nil until at least two annual premium are paid. Amount paid as surrender value is an expenditure and is similar to claims paid.

Paid-up Policy. A policy-holder, who has difficulty in paying the premium, may be allowed an option to get the policy paid-up. In such a case, the policy-holder is relieved from the obligation of paying off the rest of premium, but he will not get the full value of policy which is calculated as follows:

$$\text{Paid-up Value} = \text{Sum assured} \times \frac{\text{No. of premiums paid}}{\text{Total number of premiums payable}}$$

The amount paid on maturity in respect of paid-up policies is included in the amount of claims.

Life Insurance Fund. This represents the excess of revenue receipts over revenue expenditure relating to life business. The fund is available to meet the aggregate liability on all policies outstanding. Revenue account is prepared every year to ascertain the balance of life insurance fund at the end of the year. In the preparation of revenue account, the opening balance of the life insurance fund is the starting point Other items of revenue income are credited to the fund and revenue items of expense are debited. The resulting figure is the closing balance of the revenue fund.

Valuation Balance Sheet. The balance in the the life assurance fund cannot be taken as the profit made by the life insurance business. For the purpose of ascertaining the profit, the insurance company should calculate its net liability on all outstanding policies. This calculation is done by experts called actuaries and is a highly complicated mathematical process. Prior to nationalisation insurance companies were having this computation once in three years. Since nationalisation L I C. is having it once every two years. For calculating net liability, the actuaries calculate the present value of future liability on all the policies in force as well as pres-

FORM

Form of Revenue Account applicable
REVENUE ACCOUNT OF...........
IN RESPECT OF...........

	Business within India		*Business out of India (a)*		*Total*	
	Rs.	P.	Rs.	P.	Rs.	P.
Claims under Policies (including provision for claims due or intimated) *less* Re-insurances—						
By Death						
By Maturity						
Annuities, *less* Re-insurances						
Surrenders (including Surrenders of Bonus), *less* Re-insurances						
Bonuses in Cash, *less* Re-insurances						
Bonuses in reduction of Premiums, *less* Re-insurances						
Expenses of Management (*b*)—						
1. (*a*) Commission to Insurance Agents (*less* that on Re-insurances)... ...						
(*b*) Allowances and Commission [other than commission included in sub-item (*a*) preceding]						
2. Salaries, etc. (other than to agents and those contained in item No. 1)						
3. Travelling expenses						
4. Directors' fees						
5. Auditor's fees						
6. Medical fees						
7. Law charges						
8. Advertisements						
9. Printing and Stationery						
10. Other expenses of management (accounts to be specified)						
11. Rents for offices belonging to and occupied by the insurer						
Rents of other offices occupied by the insurer						
12. Bad Debts						
13. United Kingdom, Indian Dominion and Foreign Taxes						
14. Other Expenditure (to be specified) ...						
Profit transferred to Profit and Loss Account						
Balance of Fund at the end of the year as shown in the Balance Sheet ...						
Rs						

D. (*The Third Schedule*).
to Life Insurance Business.
FOR THE YEAR ENDED..............19 .
....................BUSINESS.

——	*Business within India*	*Business out of India (a)*	*Total*
	Rs. P.	Rs. P.	Rs. P
Balance of Fund at the beginning of the year ...			
Premiums, *less* Re-insurances—			
(*i*) First year premiums, where the maximum premiums-paying period (*g*)—			
Two years			
Three years			
Four years			
Five years			
Six years			
Seven years			
Eight years ... ... —			
Nine years			
Ten years			
Eleven years			
Twelve years or over (including throughout life			
(*ii*) Reneval premiums			
(*iii*) Single premiums			
Consideration for Annuities granted, *less* Re-insurances (*c*)			
Interest, Dividends and Rents			
Less Income-tax thereon (*d*)...			
Registration Fees			
Other Income (to be specified) (*e*)			
Loss transferred to Profit & Loss Account ...			
Transferred from Appropriation Account ...			
Rs.			

FORM

Form of Revenue Account applicable

REVENUE ACCOUNT OF...........

IN RESPECT OF...........

	Business within India		*Business out of India (a)*		*Total*	
	Rs.	P.	Rs.	P.	Rs.	P.
Claims under Policies (including provision for claims due or intimated) *less* Re-insurances—						
By Death						
By Maturity						
Annuities, *less* Re-insurances						
Surrenders (including Surrenders of Bonus), *less* Re-insurances						
Bonuses in Cash, *less* Re-insurances						
Bonuses in reduction of Premiums, *less* Re-insurances						
Expenses of Management (*b*)—						
1. (*a*) Commission to Insurance Agents (*less* that on Re-insurances)... ...						
(*b*) Allowances and Commission [other than commission included in sub-item (*a*) preceding]						
2. Salaries, etc. (other than to agents and those contained in item No. 1)						
3. Travelling expenses						
4. Directors' fees						
5. Auditor's fees						
6. Medical fees						
7. Law charges						
8. Advertisements						
9. Printing and Stationery						
10. Other expenses of management (accounts to be specified)						
11. Rents for offices belonging to and occupied by the insurer						
Rents of other offices occupied by the insurer						
12. Bad Debts						
13. United Kingdom, Indian Dominion and Foreign Taxes						
14. Other Expenditure (to be specified) ...						
Profit transferred to Profit and Loss Account						
Balance of Fund at the end of the year as shown in the Balance Sheet ...						
Rs						

D. (*The Third Schedule*).
to Life Insurance Business.
FOR THE YEAR ENDED................19 .
..................BUSINESS.

—	*Business within India*		*Business out of India (a)*		*Total*
	Rs.	P.	Rs.	P.	Rs. P
Balance of Fund at the beginning of the year ...					
Premiums, *less* Re-insurances—					
(*i*) First year premiums, where the maximum premiums-paying period (*g*)—					
Two years					
Three years					
Four years					
Five years					
Six years					
Seven years					
Eight years ... ... —					
Nine years					
Ten years					
Eleven years					
Twelve years or over (including throughout life					
(*ii*) Reneval premiums					
(*iii*) Single premiums					
Consideration for Annuities granted, *less* Re-insurances (*c*)					
Interest, Dividends and Rents					
Less Income-tax thereon (*d*)...					
Registration Fees ... — ...					
Other Income (to be specified) (*e*)					
Loss transferred to Profit & Loss Account ...					
Transferred from Appropriation Account ...					
Rs.					

FORM

Form of

BALANCE SHEET OF...........................

—	*Life and Annuity Business* (1) Rs. P.	*Other Classes of Business* (2)* Rs. P.	*Total* Rs. P.
areholders' capital (each class to be stated separately)			
uthorised :			
............shares of Rs.........each Rs.			
Subscribed :			
............shares of Rs.........each Rs.			
Called-up :			
............shares of Rs.........each Rs.			
Less Unpaid calls Rs.			
Reserve or Contingency Accounts (*a*) :			
Investment Reserve Account			
Profit and Loss Appropriation Account Balance ...			
Balances of Funds and Accounts :			
Life Insurance Fund— ...			
(*i*) Business in India ...			
(*ii*) Business outside India ...			
Fire Insurance Business Account ...			
Marine Insurance Business Account...			
Miscellaneous Insurance Business Account...			
Other accounts, if any (to be specified (*i*) ...			
Pension or Superannuation Account (*b*) ...			
Debenture stock per cent ...			
Loans and advances (*c*) ...			
Bills payable (*c*) ...			
Estimated liability in respect of outstanding claims, whether due or intimated (*d*) ...			
Annuities due and unpaid (*d*) ...			
Outstanding dividends ...			
Amounts due to other persons or bodies carrying on insurance business (*c*) ...			
Sundry creditors (including outstanding and accruing expenses and taxes) (*c*) ...			
Other sums owing by the Insurer (particulars to be given) (*c*) ...			
Contingent liabilities (to be specified) (*c*) ... Rs			
Carried over Rs.			

A. (*The First Schedule*).
Balance Sheet.
.................................19 .

—	*Life and Annuity Business* (1)	*Other Classes of Business* (2)*	*Total*
	Rs. P.	Rs. P.	Rs. P.
Loans :			
On Mortgages of property within the States ...			
On Mortgages of property outside the States...			
On security of municipal and other public rates ...			
On Stocks and Shares ...			
On Insurer's Policies within their surrender value —			
On personal security ...			
To Subsidiary Companies (other than Reversionary) (*f*) ...			
Reversions and Life Interests purchased ...			
Loans on Reversions and Life Interests .			
Debentures and Debenture Stocks of Subsidiary Reversionary Companies (*f*) ...			
Ordinary Stocks and Shares of Subsidiary Reversionary Companies (*f*) ...			
Loans to Subsidiary Reversionary Companies (*f*) ..			
Investments :			
Deposit with the Reserve Bank of India (securities to be specified) ...			
Indian Government Securities ...			
State Government Securities ..			
British, British Colonial and British Dominion Government Securities ...			
Foreign Government Securities ...			
Indian Municipal Securities ...			
British and Colonial Securities ...			
Foreign Securities ...			
Bonds, Debentures, Stocks and other Securities whereon Interest is guaranteed by the Indian Government or a State Government ...			
Bonds, Debentures, Stocks and other Securities whereon Interest is guaranteed by the British or any Colonial Government. ...			
Bonds, Debentures, Stocks and other Securities whereon Interest is guaranteed by any Foreign Government ...			
Debentures of any railway in India ...			
Debentures of any railway out of India ...			

FORM

—	*Life and Annuity Business* (1)		*Other Classes of Business* (2)*		*Total*	
	Rs.	P.	Rs.	P.	Rs.	P.
Brought forward Rs.						
Rs,						

NOTES

(*a*) The Reserves or Contingency Accounts must be separatel[y] stated.

(*b*) If the insurer has not full and unrestricted control of the asse[ts] constituting the Pension or Superannuation Accounts, either thos[e] accounts and the assets and liabilities relating thereto must be omitte[d]

—	Life and Annuity Business (1)	Other Classes of Business (2)*	Total
Preference or guaranteed Shares of any railway in India ..			
Preference or guaranteed Shares of any railway out of India ...			
Railway Ordinary Stocks (*i*) in India, (*ii*) out of India ...			
Other Debentures and Debenture Stock of Companies incorporated (*i*) in India, (*ii*) out of India ...			
Other guaranteed and Preference Stocks and Shares of companies incorporated (*i*) in India, (*ii*) out of India ...			
Other Ordinary Stocks and Shares of companies incorporated (*i*) in India, (*ii*) out of India ...			
Holdings in Subsidiary Companies (*f*)			
House property (*i*) in India, (*ii*) out of India .			
Freehold and Leasehold ground rent and rent charges ...			
Agents' Balances ...			
Outstanding Premiums (*g*) (*d*) ...			
Interest, Dividends and Rents outstanding (*d*)...			
Interest, Dividends and Rents accruing but not due (*d*) ...			
Amounts due from other Persons or Bodies carrying on Insurance Business (*h*) ...			
Sundry Debtors (*i*) ..			
Bills Receivable ..			
Cash :			
At Bankers on Deposit Account ...			
At Bankers on Current Account and in hand ...			
At Call on Short Notice (*j*) ...			
Other Accounts (to be specified) (*k*) ..			
Rs.			

* Assets and Liabilities, Shareholders' Capital and Reserves, not allocated to any class of business specified in column (1) must be shown in column (2).

from the balance sheet or the assets of which the insurer has not such control must be clearly indicated on the face of the balance sheet.

(*c*) If the insurer has deposited security as cover in respect of any of these items, the amount and nature of the securities so deposited must *be clearly indicated on the face of the balance sheet.*

(*d*) These items are or have been included in the corresponding items in the Revenue or Profit and Loss Account. Outstanding and accruing interest, dividends and rents must be shown after deduction of income-tax or the income-tax must be provided for amongst the liabilities on the other side of the balance sheet.

(*e*) Such items as amount of liability in respect of bills discounted, uncalled capital of subsidiary companies, uncalled capital of other investments, etc., must either be shown in their several categories under the heading "Contingent Liabilities" or the appropriate items on the assets side must be set out in such details as will clearly indicate the amount of the uncalled capital.

(*f*) As respects life and annuity business full particulars of holdings in and loans to subsidiary companies must be stated, giving the name of each company, the number and description of each class of shares held, the amounts paid up thereon, and the value at which the holdings in each company stand in the balance sheet.

(*g*) Either this item must be shown net or the commission must be provided for amongst the liabilities on the other side of the balance sheet.

(*h*) The aggregate amount owing by a subsidiary company or subsidiary companies is to be shown separately from all other assets and the aggregate amount owing to a subsidiary company or subsidiary companies is to be shown separately from all other liabilities.

(*i*) Amounts due from directors and officers must be shown separately.

(*j*) No amounts must be entered under this heading unless fully secured. If not fully secured, the amounts must be included under the heading "Sundry Debtors".

(*k*) Under this heading must be included such items as the following, which must be shown under separate headings suitably described: Office furniture, goodwill, preliminary formation and organisation expenses, development expenditure account, discount on debentures issued, other expenditure carried forward to be written off in future years, balance, being loss on Profit and Loss appropriation Accounts, etc. The amounts included in the balance sheet must not be in excess of cost.

(*l*) Under the head "Other accounts, if any (to be specified)" on the left hand side, fines realised from the staff and their contribution towards the provident fund, if any, should be shown under separate subheads.

(*m*) Where the insurer is required to maintain a separate account in respect of any sub-class of miscellaneous insurance business this heading is to be split up accordingly.

Illustration 2 The following trial balance was extracted from the books of the New Bharat Life Assurance Company Ltd. as on 31-12-1974.

	Debits Rs.	*Credits* Rs.
Paid-up capital :		
10,000 shares of Rs. 10 each		1,00,000
Life fund balance as on 1-1-1974		29,72,300
Dividends paid	15,000	
Bonus in reduction of premium	31,500	
Premium less re-assurance premium (commission thereon Rs. 5,000)		1,61,500
Claims paid	1,97,000	
Outstanding claims (1-1-1974)		7,000
Commission	9,300	
Management expenses	32,300	
Mortgages in India	4,92,200	
Interest, dividend and rents		1,12,700
Agents balances	9,300	
Freehold premises	40,000	
Investments	23,05,000	
Loans on policies	1,73,600	
Cash on deposit	27,000	
Cash on current account	7,300	
Surrenders	7,000	
Medical fees	7,000	
Consideration for annuities granted		10,000
Annuity	10,000	
	33,63,500	33,63,500

Prepare the revenue account for the year ended 31-12-1974 and a balance sheet of the company as at that date after taking the following into consideration :

(a)	Claims outstanding	10,000
(b)	Further bonus in reduction of premium	5,000
(c)	Premium outstanding	5,000
(d)	Claims covered under re-insurance	80,000
(e)	Management expenses due	30,000

(Bangalore B. Com. May 1975 modified)

Solution.

NEW INDIA LIFE ASSURANCE CO. LTD.
REVENUE ACCOUNT
for the year ended 31st December 1974

		Rs			Rs.
To Claims less re-assurances			By Life assurance fund at the beginning of the year		29,72,300
Claims paid	1,97,000		By Premium less reassurance	1,61,500	
Add Claims outstanding at the end of the year	10,000		*Add* Accrued premiums	5,000	
	2,07,000		By Bonus in reduction of premium	5,000	1,71,500
Less : Claims outstanding at the beginning of the year	7,000		By Consideration for annuities granted		10,000
	2,00,000				

ess : Claims covered under reinsurance 80,000	1,20,000	By Commission on reinsurance ceded	5,000
o Surrenders paid	7,000	By Interest, dividends and interests received on investments	1,12,700
o Annuities paid and due	10,000	By Fines for getting lapsed policies revised	—
o Bonus paid in cash	—	By Other items, if any	—
o Bonus in reduction of premium (31,500+5,000)	36,500		
o Expenses of management paid as per T/B 32,300			
dd Outstanding 30,000	62,300		
o Commission paid	9,300		
o Income-tax on profits	—		
o Dividends paid to shareholders	15,000		
o Other items, if any medical fees	7,000		
o Life assurance fund at the close of the year to be transferred to Balance sheet	30,04,400		
	Rs. 32,71,500		Rs. 32,71,500

NEW INDIA ASSURANCE CO. LDT.
BALANCE SHEET
as at 31st December 1974

Liabilities		Rs.	*Assets*		Rs.
Share capital :			Loans :		
Paid-up capital 10,000 shares of Rs. 10 each		1,00,000	Mortgages in India	4,92,200	
Reserve and profit and loss account balance		—	Loans on policies	1,73,600	6,65,800
Life assurance fund and funds of other business life insurance fund		30,04,400	Investments (including freehold and lease hold properties)		23,45,000
Debentures		—	Agents' balances		9,300
Other liabilities			Outstanding premiums		5,000
Outstanding claims	10,000		Interest dividends and rents outstanding		—
Outstanding expenses of management	30,000	40,000	Interest, dividends and rents accrued		—
			Amount due from other Insurers		—
			Sundry debtors		85,000(1)
			Bills receivable Cash		—
			On deposit	27,000	—
			On current account	7,300	34,300
			Other items, if any		—
		Rs. 31,44,400			Rs. 31,44,400

Tutorial Notes

(1) On account of claims Rs. 80,000
On account of commission Rs. 5,000

Rs. 85,000

Illustration 3

Bharat Life Assurance Company gets its valuation made once in every two years. Its life assurance fund on 31st December, 1978 stood at Rs. 45,65,000 before providing for Rs. 45,000 being the shareholders' dividend for 1978. Its actuarial valuation on 31st December,

1978 disclosed a net liability of Rs. 32,20,000. An interim bonus of Rs 80,000 was paid to the policy-holders during the previous two years.

Prepare a statement showing the amount now available as bonus to policy-holders, assuming that the policy-holders are entitled to the same percentage of surplus as under L.I.C. Act.

Solution.

(i) Life Insurance fund as on 31-12-1978	Rs.	45,65,000
Less Dividend for the year 1978		45,000
Balance of fund net of dividends		45,20,000

BHARAT LIFE ASSURANCE COMPANY LTD

(ii) *Valuation Balance sheet as on 31-12-78*

	Rs.		Rs.
To Net liability as per actuary's valuation as on 31-12-78	32,20,000	By Life assurance fund as per balance sheet	45,20,000
To Surplus	13,00,000		
	Rs 45,20,000		Rs. 45,20,000

(iii) Surplus as per valuation balance sheet		13,00,000
Add Interim bonus for the period		80,000
Net profit for the period	Rs.	13,80,000

	Rs.
(iv) Distribution of the surplus	
Net profit as calculated above	13,80,000
Policyholders share @ 95%	13,11,000
Less interim bonus already paid	80,000
Reversionary bonus to be declared	12,31,000
Share-holders share of profit at 5%	69,000

Accounting entries for disposal of surplus: There are 2 methods to record the accounting entries for disposal of surplus ascertained from life business. Under the first method which is followed in India the following journal entries are made and from the entries it is clear that no separate profit and loss account is prepared

(a) *Debit* Revenue account
Credit Reserve account } for the amount transferred to revenue

(*b*) *Debit* Revenue account *Credit* Bonus account	for the amount of bonus declared to policy-holders. (only payable in cash)
(*c*) *Debit* Revenue account *Credit* Shareholders life profit account	for the amount of surplus set aside for distribution as dividend.
(*d*) *Debit* Shareholders' life profit account *Credit* Dividends account	for the dividends declared from out of the surplus set aside to shareholders

Notes : (1) Dividends can alternatively be debited direct to revenue account in which case shareholders' life profit account can be dispensed with. Under this alternative approach, balance of surplus remaining undistributed is left in the insurance fund.

(2) The amounts debited to revenue account (as appropriations of surplus) must not exceed the surplus determined as per valuation balance sheet.

Under the second method, the surplus determined as per valuation balance sheet is transferred from the fund to a separate profit and loss account. All the appropriations are then debited to the profit and loss account credit being given to bonus account, dividends account, reserve account etc., So far as reversionary bonus declared is concerned, credit will once again be given to life insurance fund. Any balance of profit and loss account will appear as a separate item in the balance sheet.

Illustration 4. The New India Life Assurance Company Limited had a aid-up capital of Rs. 2,50,000 divided into 25,000 shares of Rs. 10 each. Its net liability on all contracts in force as on 31-12-1975 was Rs. 22,50,000. From the following figures extracted from its books for the year ended 31-12-1975, prepare revenue account and a valuation balance sheet. The company has paid an interim bonus of Rs. 1,03,806 and 25% of the surplus is to be allocated to shareholders and 70% to the policyholders, the balance being carried forward.

	Rs.
Life fund	24,50,000
Premium	13,80,000
Interest, dividend and rents	7,50,000
Fines and fees	,720
Bonus in cash	1,58 400
Income-tax	1,18,500
Management expenses	1,75,000
Bonus in reduction of premium	1,976
Commission	54,000
Surrenders	85,200
Surplus on revaluation of reversions	4,800
Re-assurances irrecoverable	1,250
Claims	8,90,000
Consideration for annuities granted	45,000

(B. Com., Bangalore April 1977)

Solution.

THE NEW INDIA LIFE ASSURANCE CO LTD

Revenue account for the year ended 31-12-1975

		Rs.		Rs.
To Claims paid		8,90,000	By Life assurance fund at the beginning of the year	24,50,000
To Surrenders		85,200	By Premiums less reinsurance	13,80,000
To Annuities paid		......	By Consideration for annuities granted	45,000
To Bonus paid in cash	1,58,400		By Interest, dividends and [illegible]	7,50,000
Add Bonus in reduction of premium	1,976	[illegible]		720
To Expenses of management		[illegible]		
To Commission paid		[illegible]		4,800
To Income tax		[illegible]		
To Re-assurances irrecoverable		1,250		
To Life assurances fund at the close of the year		31,46,194		
	Rs.	46,30,520	Rs.	46,30,520

VALUATION BALANCE SHEET

As on 31-12-1975

	Rs.		Rs.
To Net liability as per actuary's valuation as on 31-12-75	22,50,000	By Life assurance fund as per balance sheet	31,46,194
To Surplus	8,96,194		
Rs	31,46,194	Rs.	31,46,194

Statement showing the allocation :

	Rs.
Surplus as per valuation balance sheet	8,96,194
Add Interim bonus for the period	1,03,806
Net profit for the period	10,00,000

	Rs.	Rs.
Net profit as per above		10,00,000
Policyholders share @ 70%	7.00,000	
[illegible]	2,50,000	
[illegible]	50,C00	
Total	10,00,000	10,C0,C00

Tutorial Notes: Net amount payable to policyholders will be Rs. 5,96,194, after adjusting the interim bonus already paid to them (Rs. 7,00,000 — Rs. 1,03,806).

The forms of final accounts prescribed for the general insurance business are given below :

ACCOUNTS OF GENERAL INSURANCE BUSINESS

FORM F

FORM OF REVENUE ACCOUNT APPLICABLE TO FIRE INSURANCE BUSINESS, MARINE INSURANCE BUSINESS,* MISCELLANEOUS INSURANCE BUSINESS

Revenue account of............for the year ended...........19...in respect of.......................................Business.

	Rs.		Rs.
Claims under policies, less reinsurances (*a*) (*d*) :		Balance of account at beginning of the year :	
Paid during the year		Reserve for unexpired risks	
Total estimated liability in respect of outstanding claims at end of the year whether due or intimated		Additional reserve (if any)	
Less—Outstanding at end of previous year (*b*)		*Premium, less reinsurance (*d*)	
*Commission		Interest, dividends and rents	
Commission on direct business		*Less*—Income tax thereon	
Commission on reinsurances accepted		Commission on reinsurance ceded	
*Expenses of management (*c*)		*Other income (to be specified) (*e*)	
Bad debts		Loss transferred to profit and loss account	
United Kingdom, Indian Dominion and Foreign Taxes		Transferred from appropriation account	
Other expenditure (to be specified)			
Profit transferred to profit and loss account			
Balance of account at the end of the year as shown in the balance sheet			
Reserve for unexpired risks, being per cent of premium income of year			
Additional reserve (if any)			
Rs.		Rs.	

NOTES

(*a*) This item must include all expenses directly incurred in relatio to assessment of claims of the nature of survey fees, fees fo police reports, legal fees, court expenses and other similar char ges, but should not include any establishment or administratio expenses except in so far as they relate to any employee o survey or assessment of losses.

(*b*) If in any year the claims actually paid and those still unpaid a the end of that year in respect of the previous year's Revenu Account as provision for outstanding claims, then the amount such excess must be shown in the Revenue Account.

*Where the account is furnished under the provisions of clause (*b*) of sub-sec tion (2) of Section 16 of the Insurance Act, 1938 by an insurer to whom that sectio applies separate figures for business within India and business out of India must b given against the items marked with an asterisk. Against all other items the tot amount for the business as a whole may be given.

(c) If any sum has been deducted from this item and entered on the assets side of the balan.. sheet the amount so deducted must be shown separately.

(d) Where the account is furnished under provisions of Sec. 11 of *the Insurance Act, 1938*, separate figures for claims paid to claimants in India and claimants outside India and for premiums derived from business effected outside India must be given.

(e) All the amounts re eived by *the insurer directly or indirectly* whether from his head office or from any other source outside India shall also be shown separately in the revenue account except such sums as properly appertain to the capital account.

FORM B

FORM OF PROFIT AND LOSS ACCOUNT

Profit and Loss Account of .... for the year ended 19

	Rs		Rs
Indian (Central) taxes on the Insurer's Profits (not applicable to any particular fund or account)		Interest, dividends and rents (not applicable to any particular fund or account)	
Expenses of management (not *applicable to any particular* fund or account)[1]		*Less* Income Tax thereon	
Loss on realisation of Investments (not charged to reserves or any particular fund or account)		Profit on realisation of investments (not credited to reserves or any particular fund or account)	
Depreciation of investment (*not charged to reserves or* any particular fund or account)		Appreciation of investments (not credited to reserves or any particular fund or account)	
Loss transferred from revenue accounts (details to be given)		Profit transferred from revenue accounts (details to be given)	
Other expenditure (to be specified)		Transfer fees	
Balance for the year carried to appropriation account		Other income (to be specified)	
		Balance being loss for the year carried to appropriation account	

1 If any sum has been deducted from this item and entered on the assets side of the balance sheet, the amount must be shown *separately*

FORM C

FORM OF PROFIT AND LOSS APPROPRIATION ACCOUNT

Profit and loss appropriation account of ... for the year ended 19. .

	Rs.		Rs
Balance being loss brought forward from last year		Balance brought forward from last year	
Balance being loss for the year brought from profit and loss *account (as in Form B)*		*Less* - Dividends since paid in respect of last year (to be specified and and if "free of tax" to be so stated)	

Dividends paid during the year on account of the current year (to be specified and if "free of tax" to be so stated)		Balance of the year brought from profit and loss account (as in Form B)	
Transfers to any particular funds or accounts (details to be given)		Balance being loss at end of the year as shown in the balance sheet.	
Balance at end of the year as shown in the balance sheet.			
	———		———

EXAMINATION QUESTIONS

Illustration 5.

From the following particulars you are required to prepare Fire Revenue Account, for the year ending 31st December, 1973 :

	Rs.		Rs.
Claims paid	4,80,000	Commission	2,00,000
Claims outstanding on 1st January, 1973	40,000	Commission on reinsurance ceded	10,000
Claims intimated but not accepted on 31st December, 1973	10,000	Commission on reinsurance accepted	5,000
Claims intimated and accepted but not paid on 31st Dec., 1973	60,000	Expenses of management	3,05,000
Premium received	12,00,000	Provision for unexpired risk on 1st Jan. 1973	4,00,000
Re-insurance premium	1,20,000	Additional provision for unexpired risk	20,000
		Bonus in reduction of premium	12,000

You are required to provide for additional reserve for unexpired risks at 1% of the net premium in addition to the opening balance.

[B. Com. (Hons.) Delhi, 1973]

Solution.

FIRE REVENUE ACCOUNT

For the year ended December 31, 1973

	Rs.	Rs.		Rs.	Rs.
Claims :			Balance of account at the beginning of the year :		
Paid	4,80,000		Reserve for unexpired risks		400,000
Add Claims outstanding at the end of year (Rs. 10,000+Rs. 60,000)	70,000		Additional reserve		20,000
	5,50,000		Premiums	12,00,000	
Less Outstanding at the beginning of the year	40,000	5,10,000	*Less* Reinsurance premiums	1,20,000	
Commission		2,00,000		10,80,000	
Commission on reinsurance accepted		5,000	*Add* Bonus in reduction of premium	12,000	10,92,000
Bonus		12,000	Commission on reinsurance ceded		10,000
Expenses of management		3,05,000	Loss transferred to General profit and loss account		86,920
Provision for unexpired risk : 50% of net premiums		5,46,000			
Additional reserve : On 1st January	20,000				
Add 1% of net premium	10,920	30,920			
	Rs.	16,03,920		Rs.	16,08,920

Illustration 5. From the following particulars of Z Insurance Co Ltd, prepare separate revenue accounts of Fire and Marine business and profit and loss account for the year ended 31st December, 1969 and a balance sheet as on that date:

	Rs.		Rs.
Investment	4,06,980	Share capital (4,000 shares of *Rs. 100 each*)	4,00,000
Freehold premises	3,06,412	Claims admitted but *not paid*:	
Leasehold	12,604	Fire	4,620
Agents' balances	46 212	Marine	9,808
Sundry debtors	17,918	Creditors	44,962
Income-tax on interest and dividend	4,513	Due to re-insurers:	
Claims paid and outstanding:		Fire	2,471
Fire	1,02,412	Marine	4,143
Marine	2,61,512	*Premium received:*	
Expenses of management:		Fire	3,56,412
Fire	96,512	Marine	8,59,900
Marine	1,42,218	Interest and dividends	19,212
Commission:		Other receipts	[illegible]
Fire	34,921		
Marine	62,857		
Interest accrued	919		
Office furniture	14,761		
Preliminary expenses	90,212		
Cash and bank balances	1,01,738		
	Rs. 17,02,701		Rs. 17,02,701

Provision for unexpired risk is to be made at 40 per cent of the premium received. (B. Com Bombay 1970; C. A. Final I.C.W.A. 1966)

Solution.

REVENUE ACCOUNT OF Z LTD

For the year ending 31st December, 1969

		Fire Rs	*Marine* Rs.		*Fire* Rs.	*Marine* Rs.
Claims *less* reinsurance:				Premium *less* reinsurance	3,56,412	8,59,900
Paid during the year	97,792			Loss transferred to profit and loss account	20,000	—
Add Outstanding	4,620	1,02,412				
Paid during the year	2,51,704					
Add Outstanding	9,803		2,61,512			
Commission		34,921	62,857			
Expenses of management		96,512	1,42,218			
Reserve for unexpired risk at 40%		1,42,567	3,43,984			
Profit transferred to profit and loss account		—	49,329			
	Rs.	3,76,412	8,59,900		Rs. 3,76,412	8,59,900

PROFIT AND LOSS ACCOUNT OF Z LTD

For the year ending 31st December, 1969

	Rs.			Rs
Loss transferred from fire reveuue account	19,994	Profit transferred from marine revenue account		49,38
Balance—*being profit shown in balance sheet*	45,201	Interest dividend, etc.	19,512	
		Less Income tax	4,513	
				14,99
		Other incomes		80
	Rs. 65,195			Rs. 65,1

BALANCE SHEET OF Z LTD

As on 31st December, 1969

Liabilities	Rs	*Assets*	R
Capital		Investments	4,06,9
Aut' orised :		Freehold premises	3,06,4
...shares of Rs. 100 each	—	Leasehold	12,6
Subscribed :		Agents' balances	46,2
...shares of Rs. 100 each	—	Interest accrued	9
Called up and paid-up :		Sundry debtors	17,9
4,000 shares of Rs. 100 each	4,00,000	Cash and bank balance	1,01,7
Balance of Funds and Accounts		Office furniture	14,7
Fire	1,42,567	Preliminary expenses	90,2
Marine	3,43,984		
Reserve and Contingency Account			
Profit and loss account	45,201		
Outstanding claims	14,428		
Account due from other persons or bodies carrying on insurance business	6,614		
Sundry creditors	44,962		
	Rs. 9,97,756		Rs. 9,97,7

Illustration 7. The following balances are extracted from the books account of Jai Zuelelal Marine Insurance Company Limited :

	As at 31-12-1964 Rs.	*As at* 31-12-1965 Rs.		*As at* 31-12-1964 Rs	*As a* 31-12- Rs.
Premiums less reinsurance	45,000	50,000	Profit on sale of car	600	—
Commission on direct business	2,250	3,000	Loss on sale of old furniture	—	20
			Double income tax refund	1,400	70
			Audit fees	1,000	1,00
Commission on reinsurance accepted	1,750	2,500	Salaries to staff	12,500	13,50
Commission on reinsurance ceded	4,200	2,400	Printing, postage, stationery	4,650	5,75
			Legal charges	500	40
Claims (less reinsurance) paid during the year	7,625	14,225	Bad debts	75	2,22
Depreciation on furniture, car etc	1,275	1,575	Miscellaneous expenses	1,550	2,2

(*a*) Total amounts of estimated liability in respect of outstanding claims as at 31-12-1963, 31-12-1964 and 31-12-1965 were Rs. 3,425, Rs. 4,475 and Rs. 5,555 respectively.

(*b*) Reserve for unexpired risks at 31-12-1963 was Rs. 32,000 and additional reserve as on the said date was Rs. 3,200.

(*c*) Reserve for unexpired risks was to be provided for at 100% and additional reserve at 10% of the net premium income for the year ending 31-12-1964 and 31-12-1965.

(*d*) Prepare Marine revenue accounts from foregoing details.

(B. Com. Bombay 1966)

Solution.

M/S JAI ZUELELAL MARINE INSURANCE CO LTD

Marine revenue accounts for the year ended 31st Dec 1964 and 31st Dec. 1965

1964 Rs.		*1965* Rs	*1964* Rs.		*1965* Rs.
	Claims under policies less reinsurances			Balance of account at the beginning of the year being reserve for un-	
7,625	Paid during the year	14,225	32,000	expired risks	45,000
	Add Total estimated liability in respect of outstanding claims at the end of the year whether due		3,200	Additional reserve	4,500
44,75	or intimated	5,555	45,000	Premiums less re-insurances	50,000
12,100		19,780		Commission on re-insurances ceded	
	Less Outstanding at the end		4,200		2,400
3,425	of the previous year	4,475	600	Profit on sale of car	—
8,675		15,305	1,400	Double income tax refund	700
	Commission on direct			Loss transferred to profit	
2,250	business	3,000		and loss account	100
	Commission on reinsurance				
1,750	accepted	2,500			
	Depreciation on furniture,				
1,275	car, etc.	1,575			
12,500	Salaries to staff	13,500			
1,000	Audit fees	1,000			
4,650	Printing, postage, stationery	5,750			
500	Legal charges	400			
1,550	Miscellaneous expenses	2,250			
75	Bad debts	2,220			
	Loss on sale of furniture,	200			
	Profit transferred to profit				
2,675	and loss account	—			
	Balance of account at the end of the year as shown in balance sheet, being 100% of premium in-				
45,000	come of the year	50,000			
4,500	Additional Reserve	5,000			
86,400	Rs.	1,02,700	86,400		

Notes. Since only marine insurance business is carried on by the Company, all expenses and income including double taxation relief and profit on sale of car must be charged to revenue account as being applicable to marine revenue account.

ASSIGNMENT MATERIAL

Objective type Questions :

I. State whether the following statements are 'True' or 'False' :

1. Life insurance is more appropriate to be called life assurance.
2. All insurance contracts are contracts of indemnity.
3. There is no difference between a wagering contract and contract of insurance.
4. Bonus payable on maturity of the policy is called reversionary bonus.
5. A life insurance business is said to have earned profit only if its life assurance fund exceeds its net liability on all outstanding policies.
6. The balance sheet of a life insurance company is called a 'Valuation balance sheet'.
7. Life insurance contract is a contract of indemnity.
8. The commission on reinsurance ceded is debited to revenue account and the commission on reinsurance accepted is credited to revenue account.

II. Fill up the blanks :

1. The excess of net liability over the 'Life Assurance Fund' represents the......for the inter-valuation period.
2. The concept of surrender value of a policy is peculiar to...... .
3. When an insurance company finds the risk heavy, part of the risk is insured with another company. Such a procedure is known as......
4. The purpose of preparing the valuation balance sheet is to ascertain the......made by life insurance business..
5. Valuation balance sheet is prepared once in every......years in the case of life insurance business.
6. In the case of marine insurance the provision against unexpired risk should be......of the net premiums.
7. Commission on policies effected through insurance agents cannot exceed......of the premium in respect of fire and......in others.

III. Indicate the correct answers :

1. A valuation balance sheet is prepared by
   (*a*) a trading company
   (*b*) a banking company
   (*c*) a life insurance company

2. A general insurance business carrying on more than one type f insurance business prepares

(a) *a separate revenue account for each type of business*

(b) a separate profit and ss account for each type of business

(c) a separate revenue account and a combined profit and loss ccount.

3. Survey expenses for marine insurance claims must be

(a) *added to claims*

(b) added to law charges

(c) shown as a separate item

4. Income-tax on interest dividends and rents should be

(a) debited to provision for taxation

(b) credited to provision for taxation

(c) deducted from interest dividends and rents.

5. Cash at call and short notice will appear in balance sheet

(a) as a separate item

(b) under the heading 'Cash'

(c) under the heading 'Other Accounts'

6. Valuation balance sheet is

(a) a statement of assets and liabilities on a particular date

(b) prepared to determine profit by comparing Life Assurance Fund with net liability

(c) a statement of all assets and liabilities at market value

Problems on Life Insurance

1. The Life Assurance Fund of Sunshine Life Assurance Company Limited shows a balance of Rs. 76,87,500 on 31-12-1978. It was later observed *that the following had not been taken into account*.

(a) Dividend from investments Rs. 3,50,000

(b) Income-tax on the above Rs. 32,000

(c) Bonus in reduction of premium Rs. 4,85,000

(d) Claims covered under reinsurance Rs. 3,25,000

(e) Claims intimated but not yet admitted by the company Rs. 8,07,000.

Ascertain the balance of Life Assurance Fund in the light of the above particulars (*Adjusted Life Assurance Fund Rs 75,23,500*)

2. The revenue account of Ethereal Life Assurance Corporation showed a balance of Rs. 4,75,000 at the end of 1977 before considering the following items :

(i) Bonus utilised in reduction of premium Rs. 45,000

(ii) Outstanding premium Rs. 1,00,000

(iii) Interest accrued on investments less income-tax Rs. 25,000

(iv) Claims intimated but not yet admitted Rs. 30,000

(v) Claims covered under reinsurance Rs. 5,000

Pass journal entries necessary to make the above adjustments and recompute the balance of Life Assurance fund.

(Balance of Life Assurance Fund Rs. 5,75,000)

3. From the following balances as at 31st December, 1976 in the books of the Sun-Moon Life Assurance Company Limited prepare the revenue account and the balance sheet :

	Rs.			Rs.
Life Assurance fund as on 1st January, 1976	30,00,000	Due from re-insurers		39,000
Annuities paid	20,000	Due to re-insurers		49,000
Surrenders	69,000	Agents' balances		20,000
Reserve fund	6,65,000	Interest outstanding		15,000
Deposit with Reserve Bank of India	3,00,000	Sundry creditors		4,000
Government Securities :		Premium less reinsurance		7,00,000
Indian Government securities	32,50,000	Bonus to policyholders		30,000
Foreign Government securities	1,87,000	Commission		60,000
Loans on company's policies	6,70,000	Claims less reinsurances		
Leasehold ground rent	58,000	On Death	4,00,000	
Securities on which interest is guaranteed by the government	13,50,000	On Maturity	5,00,000	9,00,000
Share capital	50,00,000	Consideration for annuities granted		40,000
Mortgages in India	16,36,000	Salaries		50,000
Cash with bankers on C/A	30,000	Directors' fees		6,000
Cash with bankers on deposit account	16,000	Auditors' fees		8,000
Cash on hand	10,500	Law charges		2,000
State Government securities	8,88,000	Rent paid		4,000
Furniture and fixtures	40,000	Other expenses of management		1,500
Outstanding premium	68,000	Interest and rent (accountable for the year) less taxes 60,000)		3,00,000
		Interest accrued but not due		30,000

(C.A. Final November 1977)

(Balance of Life Assurance Fund at the end of the year Rs.28,89,500 ;
Balance sheet total Rs. 86,07,500)

4. From the figures stated below prepare a revenue account and a valuation balance sheet as at 31st December 1974 showing surplus for policyholders.

	Rs.
Life assurance fund (opening)	40,00,000
Premiums	25,00,000
Interest, dividends and rents	15,00,000
Consideration for annuities granted	1,00,000
Claims paid	3,00,000
Surplus on revaluation of reversion purchased	8,000
Bonus in reduction of premiums	5,000
Surrenders	1,00,000
Commission	50,000
Net liability on policies in force on 31-12-74	56,53,000

[I C.W.A. (Final) December 1976]

(Life assurance fund at close Rs. 76,53,000
and surplus as per valuation balance sheet Rs. 20,00,000)

5. The life assurance fund of Jeevan Jyothi Life Assuranc Company Limited showed a balance of Rs. 50,25,000 at the end of 197[illegible] The dividend payable to shareholders for the year amounted to Rs. 75,00[illegible] The actuary's valuation placed the net liability at Rs. 45,50,000. A interim bonus of Rs. 1,00,000 has been paid to the policyholders.

Prepare a statement showing the amount now available as bonus t policyholders. *(Surplus available to policyholders Rs. 4,75,00[illegible]*

6. Life assurance fund of Amar Life Insurance Company Limite on 31-12-1978 stood at Rs. 125 lakhs. As per actuary's valuation ne liability on that date was Rs. 85 lakhs. The company has paid an interi bonus of Rs. 50,000.

The company has a paid-up capital of Rs. 5 lakhs on which a divi dend of 10% is payable for the year. Ascertain the amount due to policy holders. *(Balance due to policyholders Rs.37,50,00[illegible]*

7. From the figures set out below, prepare the balance sheet of Life Insurance Company as on 31st December 1974 in form (as far a circumstances permit) prescribed by Insurance Act, 1938 as governed b Life Insurance Corporation Act, 1956.

The company's deposit with Controller General in 3½% G.P. Note are of the face value of Rs. 10,00,000 and it also holds the followin investments, besides loans of Rs. 3,00,000 on the security of the company' policies.

4% Port Trust bonds of the face value of Rs. 12,00,000,

5½% War bonds of the face value of Rs. 25,00,000.

Agents collection of [illegible] out of which after dedu[illegible] they remitted to the comp[illegible] 1975.

Other assets and liabilities were : Furniture Rs. 80,000 cash in hand Rs. 20,000, cash at bank Rs. 1,00,000. Outstanding premium Rs. 4,00,000. Interest accrued Rs. 1,00,000 out of which Rs. 30,000 was due. Share capital consists of 4,000 shares of Rs. 1,000 each, Rs. 500 paid-up. Commission due but not paid Rs 2,00,000. Estimated liability regarding claims unpaid Rs. 6,00,000.

The balance consists of Life Insurance fund 75% and investment reserve fund 25%. [I.C.W A. (Final) December 1975]

(Balance sheet total Rs 61,00,000 ; Life Insurance fund Rs. 24,75,000)

8. From the following trial balance, prepare a balance sheet and revenue account of Happy-go-Lucky Life Insurance Corporation for the year ended 31-12-1978.

	Dr. *Amount*	*Cr.* *Amount*
Loans on Reversion	80,000	
Loans on Life policies	6,40,000	
Municipal securities	4,00,000	
Government of India securities	6,40,000	
Foreign Government securities	1,60,000	
Freehold ground rents	6,[illegible]	

Reversions	4,00,000	
Outstanding premiums	40,000	
Outstanding Interest, dividends, etc.	10,000	
Surrenders	14,800	
Cash in hand	40,000	
Claims admitted but not paid		8,000
Claims on business		
in India	1,60,000	
outside India	8,000	
Sundry Creditors		12,000
Balance of Life Assurance Fund on 1-1-1978		32,00,000
Expenses of management	16,000	
Premiums on business		
n India		3,20,000
outside India		68,800
Mortgages on property		
in India	2,40,000	
outside India	1,20,000	
Rs.	36,08,800	36,08,000

(*Balance of Life Assurance Fund Rs. 33,90,000 ; Balance sheet total Rs. 34,10,000*)

Problems on General Insurance

9. The following balances appeared in the books of the Hindustan Fire and General Insurance Company Limited on 31st December, 1972.

	Rs.		Rs.
Reinsurance premiums paid	50,000	Commission	1,52,000
Reserves for unexpired risk as on 1-1-1972	8,24,800	Claims paid	2,21,000
Expenses of management	1,25,600	Loss on exchange	9,000
Premiums received	7,89,000	Claims outstanding 1-1-1972	2,81,000

You are required to prepare revenue account for the year ended 31st December. 1972, after taking the following information into consideration : (*i*) Provide for unexpired risks at 50% of the premiums ; (*ii*) Create additional reserve of Rs. 75,000 ; (*iii*) Premiums outstanding at the end of the year were Rs. 1,50,000 ; (*iv*) On 31st December, 1972, the claims outstanding were Rs. 3,37,000. (B. Com. Kanpur 1972 Modified)

[*Profit Rs. 6,39,700 : Balance of fund Rs. 5,19,500*]

10. From the following balances of the Asian General Insurance Co Ltd as on 31st Decembnr, 1970, prepare (*a*) Fire revenue account : (*b*) Marine revenue account, and (*c*) Profit and loss account.

	Rs.		Rs.
Bonus in reduction of premium (Fire)	2,000	Additional reserve on 1st Jan. 1970 (Fire)	50,000
Bad debts (Fire)	5,000	Depreciation	35,000
Bad debts (Marine)	12,000	Interest, dividends received	14,000
Directors' fees	5,000	Miscellaneous receipts	5,300
Auditors' fees	1,200	Profit on sale of land	60,000
Share transfer fees	800	Fire premiums *less* reinsurance	6,00,000
Bad debts recovered	1,200	Marine premiums less reinsurance	10,80,000
Fire fund (1st Jan 1970)	2,50,000		

Marine fund (1st Jan. 1970)	8,20,000	Management expenses (Fire)	1,45,000
Claims paid (Fire)	1,80,000	Management expenses (Marine)	4,00,000
Claims outstanding (Fire)	10,000	Commission on reinsurance ceded (Fire)	30,000
Claims paid and outstanding (Marine)	3,80,000	Commission on reinsurance ceded (Marine)	60,000
Commission paid (Fire)	90,000	Commission on reinsurance accepted (Fire)	10,000
Commission paid (Marine)	1,08,000		

(B. Com. Nagpur 1969 ; B. Com. Marathwada 1971 Modified)

[Profit—Fire Rs. 1,88,000 ; Loss —Marine Rs. 20,000 ; Net Profit Rs. 2,08,100]

11. From the following information, prepare revenue account of a *Fire Insurance Company for the year ending December 31, 1970 :*

	Rs.		Rs.
Fire fund on 1-1-1970	6,00,000	Claims outstanding on 1-1-1970	20,000
Premiums received	4,50,000	Claims outstanding on 31-12-1970	24,000
Premiums due but not received	30,000	Claims recovered under reinsurance	18,000
Premiums paid for re-insurance	10,000	Commission to agents	42,000
Interest, dividends and rent (gross)	70,000	Expenses of management	84,000
Income tax deducted therefrom	8,000	Rent prepaid for office building	1,000
Profit on sale of investments	7,000	Loss on sale of office machines	2,000
Sundry incomes	2,000	Commission on reinsurance accepted	3,000
Claims paid during the year	3,80,000		

Keep a reserve for unexpired risk equal to 50% of the premiums and additional reserve of Rs. 80,000.

(B. Com. Punjab 1971 Modified) **27 1**

(Profit Rs 3,29,000)

12. On December 31 1967 the books of the Good Luck Insurance Co Ltd contained the following particulars in respect of the fire insurance :

	Rs		Rs.
Reserve for unexpired risks on Dec. 31, 1966	5,00,000	*Re-insurance recoveries*	20,000
Additional reserve on Dec. 31, 1966	1,00,000	Premiums	11,20,000
Claims paid	6,40,000	Interest and dividend	64,520
Expenses of management (including Rs 30,000 legal expenses paid in connection with claims)	2,80,000	Income tax on above	6,520
Re-insurance premium	75,000	Profit on sale of investments	11 000
		Commission	1,52,000
		Estimated liability in respect of outstanding claims :	
		On Dec. 31, 1966	65,000
		On Dec 31, 1967	90,000

Prepare the fire insurance revenue account for the year 1967 reserving 50 per cent of the premiums for unexpired risks and keeping an additional reserve of Rs. 1,00,000. **(B. Com. Nagpur 1970)** *27·2*

(Profit Rs. 14,500)

13. From the following balances of the Reliable General Insurance Co Ltd prepare revenue accounts of *(a)* Fire department, *(b)* Marine department, and profit and loss account for the year ending December 31, 1969. In addition to usual reserves of 50% (Fire department) and 10% (Marine department) of premiums, additional reserve in case of fire insurance is to be increased by 5% of net premiums.

Depreciation	Rs. 52,500	Claims paid during the year (marine)	Rs. 4,00,000
Interest and dividends, etc. received	21,000	Claims outstanding at the end of the year (marine)	2,30,000
Difference in exchange (*Cr*)	450	Commission paid (fire)	1,35,000
Fire fund as on 1-1-1969	3,75,000	Commission paid (marine)	1,62,000
Marine fund as on 1-1-1969	12,30,000	Additional reserve on 1-1-1969 (fire)	75,000
Bad debts (fire)	7,500	Miscellaneous receipts	7,500
Bad debts (marine)	18,000	Fire premiums *less* re-insurance	9,00,000
Auditor's fees	1,800	Marine premiums *less* re-insurance	16,20,000
Directors' fees	7,500	Management expenses (fire)	2,17,500
Share transfer fees	1,200	Management expenses (marine)	6,00,000
Claims outstanding at the beginning of the year (fire)	75,000	Commission on re-insurance ceded (fire)	45,000
Claims paid during the year (fire)	2,00,000	Commission earned on re-insurance ceded (marine)	90,000
Claims outstanding at the end of the year (fire)	1,60,000		
Claims outstanding at the beginning of the year (marine)	60,000		

(B. Com Advanced Accounting Poona 1970) 27·4

[*Profit : Fire Rs. 1,80,000 ; Loss Marine Rs. 30,000 ; Net profit Rs. 1,18,350*]

14. The following figures have been extracted from the books of National Insurance Co. Ltd. in respect of their marine business for 1975 :

	(*In lakhs of Rs.*)
Direct premium income received	50·00
Reserve for unexpired risks as on 1-1-1975	60·00
Claims outstanding as on 1-7-1975 (net)	20·00
Bad debts	10·00
Income from investments and dividends (gross)	10·00
Rent received from properties	5·00
Investments in Govt. securities as on 1-1-75	100·00
Investments in shares as on 1-1-75	20·00
Commission paid on direct business	5·00
Expenses of management	5·00
Income-tax deducted at source	3·00
Profit and loss account (Cr) balance on 1-1-75	10·00
Other expenses	1·25
Re-insurance premium receipts	5·00
Outstanding claims as on 31-12-1975 (net)	30·00
Direct claims paid (gross)	25·00
Re-insurance claims paid	4·00

Prepare a revenue account, profit and loss account and the profit and loss appropriation account for the year, after taking into account the following further information :

(*a*) All direct risks are re-insured for 20% of the risk.
(*b*) Claim a commission of 25% on re-insurance ceded.
(*c*) Provide 25% commission on re-insurance accepted.
(*d*) Market value of investments as on 31-12-75 is as under :
(*i*) Government securities — Rs. 105 lakhs
(*ii*) Shares — 18 lakhs

Adjust separately for each of these two categories of investment.

(*e*) Provide 65% for income-tax. [C.A. (Final), May 1976]

[*Profit in revenue account Rs. 18 lakhs, Net profit Rs. 10 35 lakhs, Balance in the appropriation account Rs. 20·35 lakhs*]

Hints : (1) From the direct claims paid deduct 20% covered by re-insurance.

(2) From the premium received deduct 20% passed on to re-insurers.

(3) Provision for income-tax :

	(*in lakh Rs.*)
Income as per revenue account	18·00
Add Tax deducted at source (income is not grossed up)	3·00
	21 00
Provision at 65%	13·65
Less Tax already deducted at source	3·00
Net provisions required	10 65

15. From the following balances of Hemshah General Insurance Co. Ltd. prepare the necessary revenue accounts and the profit and loss account in respect of the year 1971 :

Bad debts (fire)	Rs. 5,000	Difference in exchange (*Cr.*)	Rs. 300
Bad debts (marine)	10,000	Profit on sale of land	60,000
Auditor's fees	2,000	Fire premium less reinsurance	6,00,000
Directors' fees	4,200	Marine premium less re-insurance	10,80,000
Share transfer fees	400	Management expenses :	
Miscellaneous income	1,600	Fire	1,45,000
Fire fund (1-1-71)	2,50,000	Marine	[illegible]
Marine fund (1-1-71)	8,20,000	Claims outstanding on	
Claims paid (fire)	1,40,000	1-1-71 (fire)	[illegible]
Claims paid (marine)	3,00,000	Claims outstanding on	
Commission paid (fire)	90,000	1-1-71 (marine)	[illegible]
Commission paid (marine)	1,08,000	Commission earned on re-insurance ceded :	
Additional reserve as on 1-1-71 (fire)	50,000		
Depreciation	35,000	Fire	[illegible]
Interest, dividends etc. received	19,000	Marine	[illegible]

(*i*) The normal reserve required is 50% of net premium [illegible] 100% of net premium for marine. In addition, for fire 15[illegible] premium is to be provided as additional reserve.

(*ii*) The estimated liability in respect of outstanding [illegible] intimated as on 31st December 1971 was : Fire, Rs. 1[illegible] Rs. 1,40,000.

(*iii*) The management expenses stated above [illegible] for the respective departments. In addition, [illegible] Rs 20,000 were incurred which must be charged [illegible] ments in the ratio of premiums received.

(*iv*) The following re-insurance premiums in respect of busines accepted and ceded respectively have not been included in the abov figures :

	Reinsurance accepted	*Reinsurance ceded*
Fire	Rs. 25,000	Rs. 20,000
Marine	Rs. 60,000	Rs. 45,000

(*v*) The rate of commission in case of fire business is 15% of re insurance premium accepted and in case of marine business it is 10% o reinsurance premium accepted. (B. Com. Bombay 1972

[*Profit : Fire Rs. 100,882 ; Loss : Marine Rs 38,882 ; Net profit Rs. 52,100*

Note : Management expenses have been divided in the ratio o 6,05,000 : 10,95,000 *i e.*, 121 :219.

16 The following balances have been extracted from the books o General Insurance Co. Ltd. as on 31st December 1974, who are carryin on only fire insurance business :

	Rs.
Premium less re-insurance	5,00,000
Reserve for unexpired risks as on 31st December 1973	2,00,000
Claims less re-insurance	2,75,000
Claims outstanding as on 31st December 1974	75,000
Commission on direct business	30,000
Commission on re-insurance ceded	20,000
Commission on re-insurance accepted	10,000
Bad debs	1,500
Foreign taxes	1,000
Rent, rates and taxes	12,000
Establishment charges	50,000
Audit fees	2,000
Postage and telegram	1,500
Printing and stationery	2,500
Depreciation	4,000
Policy stamp	500
Share capital	5,00,000
General reserve	1,00,000
Profit and loss app. account (31-12-1973)	20,000
Amount due to other persons carrying on insurance business	80,000
Amount due from other persons carrying on insurance business	4,00,000
Cash in hand	2,600
Cash at bank	1,21,400
Deposit with Reserve Bank	2,00,000
Investments : G. P. Notes	2,50,000
Shares	1,00,000
Interest and dividends received (Net)	15,000
Directors' fees	2,000
Managing Director's remuneration minimum	18,000
Sundry debtors	50,000
Sundry creditors	20,000
Investment reserve (31-12-1973)	60,000
Motor car, furniture, etc.	56,000

The following further particulars are available :

(1) Claims less reinsurance, Rs. 2,75,000 has been arrived at after taking into account claims paid, and also outstanding claim of Rs. 50,000 as on 31st December 1973.

(2) Reserve for unexpired risks to be kept at 50% of the premium income.

(3) Share capital is composed of 50,000 equity shares of Rs. 10 each.

(4) Market value of investments as on 31st December 1974 was Rs. 2,80,000.

(5) *Provision for taxation to be made at 60%.*

You are required to prepare the fire revenue and profit and loss appropriation accounts for the year ended 31st December 1974 and to draw up the balance sheet as on that date. [C A. (Final) May 1975]

[*Revenue account profit Rs. 75,000, Balance in the appropriation account Rs. 46,000, Balance Sheet total Rs. 11,80,000*]

17. The account of the Mutual Benefit General Insurance Co. Ltd. has extracted a few items from the trial balance of the company as at December 31, 1971 and has requested you to prepare necessary accounts in the statutory forms to disclose the profit or loss for the year 1971. The items extracted are as follows :

Director's fees	Rs 27,000	Interest received	Rs 9,000
Dividends received	25,000	Fixed assets (January 1, 1971)	10,000
Provision for taxation (January 1, 1971)	75,000	Income tax paid during the year	50,000

	Fire Rs.	*Marine* Rs.
Outstanding claims as on January 1, 1971	13,000	3,000
Claims paid	45,000	27,000
Reserve for unexpired risk (January 1, 1971)	50,000	37,000
Premiums received	1,35,000	79,000
Commission to agents	15,000	10,000
Expenses of management	19,000	7,000
Reinsurance premium (*Dr.*)	13,000	3,000

The following points are also to be taken into account :

(*a*) Depreciation on fixed assets at 10% to be provided.

(*b*) Interest accrued Rs 2,000.

(*c*) The directors have decided that the provision for taxation should stand at Rs 40,000 as on December 31, 1971.

(*d*) Claims outstanding as on December 31, 1971—Fire Rs. 5,000; Marine Rs. 1000.

(*e*) Premiums outstanding as on December 31, 1971--Fire Rs. 12,000; Marine Rs. 8,000.

(*f*) Reserve for unexpired risks to be kept : Fire 50% of the premiums ; Marine 100% of the premiums (Marathwada 1972) 27 6

[*Profit Fire Rs. 45,000 ; Loss : Marine Rs. 7,000 ; Net profit Rs. 31,000*]

(*iv*) The following re-insurance premiums in respect of business accepted and ceded respectively have not been included in the above figures :

	Reinsurance accepted	*Reinsurance ceded*
Fire	Rs. 25,000	Rs. 20,000
Marine	Rs. 60,000	Rs. 45,000

(*v*) The rate of commission in case of fire business is 15% of re-insurance premium accepted and in case of marine business it is 10% of reinsurance premium accepted. (B. Com. Bombay 1972)

[*Profit* : *Fire Rs. 100,882* ; *Loss* : *Marine Rs 38,882* ; *Net profit Rs. 52,100*]

Note : Management expenses have been divided in the ratio of 6,05,000 : 10,95,000 *i e.*, 121 :219.

16 The following balances have been extracted from the books of General Insurance Co. Ltd. as on 31st December 1974, who are carrying on only fire insurance business :

	Rs.
Premium less re-insurance	5,00,000
Reserve for unexpired risks as on 31st December 1973	2,00,000
Claims less re-insurance	2,75,000
Claims outstanding as on 31st December 1974	75,000
Commission on direct business	30,000
Commission on re-insurance ceded	20,000
Commission on re-insurance accepted	10,000
Bad debs	1,500
Foreign taxes	1,000
Rent, rates and taxes	12,000
Establishment charges	50,000
Audit fees	2,000
Postage and telegram	1,500
Printing and stationery	2,500
Depreciation	4,000
Policy stamp	500
Share capital	5,00,000
General reserve	1,00,000
Profit and loss app. account (31-12-1973)	20,000
Amount due to other persons carrying on insurance business	80,000
Amount due from other persons carrying on insurance business	4,00,000
Cash in hand	2,600
Cash at bank	1,21,400
Deposit with Reserve Bank	2,00,000
Investments : G. P. Notes	2,50,000
Shares	1,00,000
Interest and dividends received (Net)	15,000
Directors' fees	2,000
Managing Director's remuneration minimum	18,000
Sundry debtors	50,000
Sundry creditors	20,000
Investment reserve (31-12-1973)	60,000
Motor car, furniture, etc.	56,000

The following further particulars are available :

(1) Claims less reinsurance, Rs. 2,75,000 has been arrived at after taking into account claims paid, and also outstanding claim of Rs. 50,000 as on 31st December 1973.

(2) Reserve for unexpired risks to be kept at 50% of the premium income.

(3) Share capital is composed of 50,000 equity shares of Rs. 10 each.

(4) Market value of investments as on 31st December 1974 was Rs. 2,80,000.

(5) Provision for taxation to be made at 60%.

You are required to prepare the fire revenue and profit and loss appropriation accounts for the year ended 31st December 1974 and to draw up the balance sheet as on that date. [C A. (Final) May 1975]

[*Revenue account profit Rs. 75,000, Balance in the appropriation account Rs 46,000, Balance Sheet total Rs. 11,80,000*]

17. The account of the Mutual Benefit General Insurance Co. Ltd. has extracted a few items from the trial balance of the company as at December 31, 1971 and has requested you to prepare necessary accounts in the statutory forms to disclose the profit or loss for the year 1971. The items extracted are as follows :

Director's fees	Rs 27,000	Interest received	Rs 9,000
Dividends received	25,000	Fixed assets (January 1, 1971)	10,000
Provision for taxation (January 1, 1971)	75,000	Income tax paid during the year	50,000

	Fire Rs.	Marine Rs.
Outstanding claims as on January 1, 1971	13,000	3,000
Claims paid	45,000	27,000
Reserve for unexpired risk (January 1, 1971)	50,000	37,000
Premiums received	1,33,000	79,000
Commission to agents	15,000	10,000
Expenses of management	19,000	7,000
Reinsurance premium (*Dr.*)	13,000	3,000

The following points are also to be taken into account :

(*a*) Depreciation on fixed assets at 10% to be provided.

(*b*) Interest accrued Rs. 2,000.

(*c*) The directors have decided that the provision for taxation should stand at Rs 40,000 as on December 31, 1971.

(*d*) Claims outstanding as on December 31, 1971—Fire Rs. 5,000 ; Marine Rs. 1000.

(*e*) Premiums outstanding as on December 31, 1971--Fire Rs. 12,000 ; Marine Rs. 8,000.

(*f*) Reserve for unexpired risks to be kept : Fire 50% of the premiums ; Marine 100% of the premiums. (Marathwada 1972) 27 6

[*Profit : Fire Rs. 45,000 ; Loss : Marine Rs. 7,000 ; Net profit Rs. 31,000*]

	Dr.	Cr.
Commission :		
Fire	34,800	
Marine	24,700	
Income-tax on interest	2,900	
Directors' fees and travelling expenses	5,800	
Depreciation on Furniture	400	
Contribution to staff provident fund	1,500	
Securities deposited with Reserve Bank of India	12,59,100	
Co-operative Land Mortgage Bank debentures	2,93,500	
Interest accrued	3,600	
State Government loans	1,52,000	
National Savings Certificates	90,000	
Shares in companies	40,000	
Premiums outstanding :		
Fire	70,400	
Marine	59,600	
Sundry debtors	19,300	
Fixed deposit (Staff Security)	7,200	
Fixed deposit (Emp. P. F. Investments)	7,000	
Cash and bank balances	65,400	
Furniture less depreciation	3,200	
Library Books	1,000	
Reserve for unexpired risks :		
Marine		1,22,000
Fire		65,100
Premiums less re-insurance		
Fire		1,65,300
Marine		1,11,800
Additional reserves :		
Fire		71,400
Marine		7,500
Claims outstanding at the commencement :		
Fire		1,900
Marine		100
Interest on investments		25,700
Miscellaneous receipts		100
Share capital—1,40,000 shares of Rs. 10 each		14,00,000
General reserve		1,27,800
Staff security deposit		7,200
Staff provident fund		7,000
Sundry creditors		1,60,000
Contingency reserve		20,000
Investment fluctuation reserve		14,000
	Rs. 23,06,900	23,06,900

(1) Estimated Liability in respect of claims outstanding at the close of the year was as under :

Fire	Rs. 2,600
Marine	Rs. 9,400

(2) You are requested to make following provisions :

(*i*) Rs. 10,000 for survey expenses for marine insurance claims.

(*ii*) Rs. 20,000 for provision for taxation.

(3) Provide in case of Fire Insurance for Additional Reserve for nexpired risks at 10% of the net premium in addition to the opening alance.

(4) In respect of fire insurance, a reinsurance premium paid Rs. 0,000 a claim of Rs. 10,000 covered by reinsurance and commission at % on reinsurance ceded have still to be accounted for.

(5) Market value of the investment Rs. 18,25,500.

(6) Reserve for unexpired risks should be 50% of the premiums ess reinsurances in case of Fire Business and 100% of the premiums less reinsurances in Marine Business.

You are required to prepare the Revenue Accounts and Profit and Loss Account for the year ended 31st December 1973 and the Balance Sheet as on that date. [C.A. (Inter) May 1975]

[*Profit : Fire Rs. 620, Marine Rs. 7,100, Net Profit Rs. 2,920*
Balance sheet total Rs. 20,82,800]

20. From the following trial balance as on 31-12-69 drawn from the books of Calcutta General Insurance Co Ltd and with the help of the further information, draw up the separate revenue accounts, profit and loss appropriation account for 1969 and a balance sheet as on 31-12-69.

Dr. Balances	Rs.	*Cr. Balances*	Rs.
Claims paid *less* re-insurances :		Share transfer fees	200
Fire	2,00,000	Compensation from Life Insurance Corporation (Transfer to profit and loss account)	2,00,000
Marine	75,000	General reserve	50,000
Miscellaneous	1,50,000	Share capital (equity shares of Rs. 10 each)	3,00,000
Commission paid		Balances of funds as on 1-1-69 :	
Fire	45,000	Fire	2,50,000
Marine	30,000	Marine	50,000
Miscellaneous	37,000	Miscellaneous	1,00,000
Expenses of management :		Premiums *less* re-insurances :	
Marine	24,000	Marine	2,00,000
Fire	30,000	Fire	3,00,000
Miscellaneous	22,000	Miscellaneous	2,50,000
Investments (at cost) :		Unclaimed dividend	5,000
Deposits with Reserve Bank of India (Central Government Securities)	1,00,000	Amount due to other insurers	1,75,000
Central Government Securities	6,50,000	Sundry creditors	25,000
State Government Securities	2,00,000	Profit and loss account (Balance on 1-1-69)	30,000
Fully paid shares of joint-stock companies	50,000	Interest and dividends (net) (not relating to any fund)	20,000
Interest accrued but not due	5,000	Investment reserve	50,000
Amounts due from other insurers	85,000	Outstanding claims as on 1-1-69 :	
Furniture (cost Rs. 8,000)	7,000	Marine	10,000
Building (cost Rs. 1,50,000)	1,40,000	Fire	30,000
Cash in hand	8,200	Miscellaneous	20,000
Cash at bank in current account	2,50,000		

		Commission on reinsurance ceded :	
		Fire	15,000
		Marine	18,000
		Miscellaneous	10,000
Rs.	21,08,200	Rs.	21,08,200

Further information :

(*a*) Outstanding claims as on 31-12-69 (*less* re-insurances) :

Fire	Rs. 40,000
Marine	Rs. 20,000
Miscellaneous	Rs. 25,000

(*b*) Market value of investments on 31-12-69 Rs. 8,90,000.

(*c*) Depreciation on furniture @ 10 per cent and on building @ 2 per cent to be charged to profit and loss account.

(*d*) Reserve for unexpired risks to be provided @ 50 per cent of the premium income for the year.

(*e*) *Transfer to general reserve—Rs 2,00,000.*

(*f*) Ignore taxation. (I C.W.A July 1965) 27·8

[Profit . Fire Rs 1,30,000, Marine Rs. 29,000, Miscellaneous Rs 21,000 ; Net profit Rs. 3,36,400 , Profit and loss appropriation account Rs. 1,65,400 ; Balance sheet total Rs. 14,91,400]

Notes . 1. Depreciation has been provided on cost.

2. Reserve for unexpired risk on marine business also has been calculated at 50% of net premiums.

SUGGESTED READING

1. Insurance Act 1938
2. Life Insurance Corporation Act, 1956
3. *Accountancy*—William Pickles

3

Double Account System

So far we have adopted a single account system of presenting annua financial statements (final accounts). It is a system where annual financia statements include trading and profit and loss account and *one* balanc sheet. Single account system must not be confused with single entr system. Single entry system is a defective double entry system whil single account system only says that annual financial statements of a firr include *one* balance sheet. Thus a firm, whether having double entr system or single entry system, is said to have single account system if puts forth *one* balance sheet while presenting its annual financial stat ments.

Double account system is a system of presenting annual financi statements where a firm prepares *two* balance sheets instead of one. Agai double account system must not be confused with double entry syster Double entry system is the system of recording transactions in bool while double account system is the system of presenting annual financi statements. A firm presenting its annual statements on double accou system keeps its books of accounts on double entry system.

Double accounts system is used in England by public utility organ sations such as railways, electricity, water and gas undertakings. The public utilities enjoy monopolistic rights in their business of renderir service to the community. There are special Acts of Parliament regula ing such business and the Acts also provide the manner in which the undertakings will have to present the accounts. The main features double account system are as follows :

(*i*) The undertakings which adopt this system of presenting the final accounts require a large amount of fixed capital. This capital permanently invested in fixed assets and it cannot, ordinarily, be take back from the business. A large part of the capital is raised from tl public and hence the undertaking has a moral responsibility to give fu information to the public as to the sources from which the fixed capit was raised and how the amount was utilised on account of the importan of the fixed capital and fixed assets, the details regarding current asse and current liabilities are separately dealt with. This is done by splittir the balance sheet into two sections : (*a*) Statement of receipts and expe diture on capital account, and (*b*) General balance sheet. The balance the first statement, *i.e.* capital account, is carried to the general balan sheet. It is because of this feature that this system is called 'Doub Account' system. It should, however, be understood that accounting kept on the basis of double entry book-keeping only.

(ii) Profit and loss account is renamed as revenue account and profit and loss appropriation account as net revenue account.

(iii) Depreciation is not shown as a deduction from fixed assets. Thus fixed assets are shown at original cost *plus* additions during the year and depreciation is provided by creating reserves and other funds which appear on the liability side of the general balance sheet.

(iv) General reserves, sinking fund, depreciation fund, investment fluctuation fund, balance of net revenue account, capital reserve are shown in the general balance sheet on the liability side.

(v) Loans and debentures are treated as capital and shown in the capital account. Consistent with this procedure interest on loans and debentures is debited to Net Revenue Account as an appropriation of profits.

(vi) Discount and premium on issue of shares and debentures are permanently retained as capital items.

(vii) Renewals are provided for out of current revenue.

(viii) The capital account shows the total expenditure to date on assets which may or may not be in existence at the date of the account.

(ix) The published accounts are accompanied by voluminous statistical returns and statements.

(x) In the capital account and also the general balance sheet the prefixes 'to' and 'by' are used

Differences between Single Account and Double Account System :

1. All transactions under the double account system are recorded on the same principles of double entry as are followed by any undertaking keeping its accounts under the single account system. It is only in the presentation of final accounts to the public that the double account system differs from the single account system. Under the single account system only one balance sheet is prepared in the form of a statement of assets and liabilities but under the double account system the balance Sheet is prepared and presented in two parts, *viz.*, capital account and general balance sheet.

2. The main purpose of preparing the balance sheet under single account system is to show the financial position of the concern on a particular date but in the case of double account system the main purpose is to show the amount of capital received and how the same has been invested in fixed assets.

3. Under single account system assets are shown in the balance sheet after deduction of depreciation from the concerned assets. Under double account system the fixed assets are always shown in the capital account at their original cost without deducting any depreciation therefrom. They are not written down in the books year after year. Depreciation on these assets is, however, provided for by charging the amount of depreciation to revenue account every year and crediting it to the depreciation fund account. The depreciation fund is invested in outside securities which are treated as depreciation fund investments. The depre-

ciation fund and the corresponding investments are shown in the general balance sheet.

4. Under the single account system the revenue accounts are called the profit and loss account and the profit and loss a ppropriation account. They take the form of revenue account and net revenue account respectively under the double account system.

Advantages of Double Account System

1. The capital account is in the nature of cash account. It readily discloses the sources of capital and the manner in which the capital is used in the form of assets and the cash balance left. The account is easily understood even by persons who do not have special knowledge of accounting.

2. Depreciation fund is compulsorily created and invested in securities. This helps in the replacement of assets without affecting cash resources of the undertaking.

3. Public utility concerns which adopt the double account system enjoy monopoly rights granted by the State. The prescribed form of presentation of accounts enables the State to ensure that the concern renders the most efficient service at reasonable cost.

4. Revenue Account is concerned purely with the operating activities of the undertaking. All items which are extraneous to the actual working of the concern are taken to the net revenue account.

5. The standardisation of the form in which the accounts are published enables the undertaking to compile easily many statistical returns reflecting the services rendered to the public.

The double account system comes in for criticisms on the following grounds :

1. All assets are shown in the capital account at cost and hence the balance sheet does not reveal the true position. It may be stated in reply to this criticism that while the assets remain at cost, a depreciation fund is built up to cover obsolescence and wear and tear of the assets.

2. The capital account includes expenditure on promotion of Parliamentary bills and preliminary expenses. This holds good in the case of single account system also.

3. Capital Account includes assets having very hort life. Such assets appear in the account even after they are reduced to scrap value.

4. The repairs and renewals are charged to revenue account of the same period in which they are incurred. This involves little or no expenditure in some years and very heavy expenditure in others. Therefore each year's profits and losses are incorrectly stated. In order to equalise the burden to revenue over the different years some undertakings maintain a repairs and renewals reserve Particular attention to this question should be paid in the early years of the undertaking because actual renewals will be very small during such periods.

5. It is not always possible to calculate exactly the amount to be charged to revenue on replacement of an asset by the construction of a new and improved asset.

6. The general public cannot easily understand the accounts and the accompanying statements.

FINAL ACCOUNTS UNDER THIS SYSTEM

The final accounts prepared under this system normally comprise *(i) Revenue Account, (ii) Net Revenue Account, (iii) Capital Account* and *(iv)* General Balance Sheet

(i) **Revenue account** It is like the ordinary profit and loss account of any trading concern, showing on the debit side all items of expenditure and showing on the credit side all items of income. It may be noted that depreciation is debited to revenue account and credited to the depreciation fund account and not to the asset account concerned

(ii) **Net Revenue Account.** It is similar to the profit and loss appropriation account of a trading concern with the exception that interests on loans and debentures are shown on the debit side of the net revenue account as if they are appropriations out of profits. Such a treatment is given because debentures and loans are considered as a part of the capital of the concern and shown in the capital account along with fixed assets This is in contrast to the practice followed in trading concerns whose interest is considered as a charge against profits and hence debited to profit and loss account.

(iii) **Capital Account.** The main purpose of this account is to show *the total capital* and *its sources and the application of this capital in the* investment of fixed assets for the purpose of carrying on the business of the undertaking It is also called the receipts and expenditure on capital account. It discloses the receipts from the issue of shares, debentures and loans and the expenditure out of such receipts on the acquisition of and additions to fixed assets. The capital account is preparad in a columnar [illegible] three columns on either side. On the receipts side the first [illegible] shown in three columns on the other side.

Preliminary expenses on formation are treated as capital expenditure and shown on the expenditure side of the account. Premium received on *issue of shares and debentures is shown on the receipts side. The dis-*counts on issue of shares and debentures are deducted from the proceeds of such issue and only the net amount is shown.

The balance of the capital account is carried down and shown as a separate item in the general balance sheet. In the case of electricity supply companies the total capital receipts and the total capital expenditure are shown in the General Balance Sheet instead of only the balance.

(iv) **General Balance Sheet.** The general balance sheet displays the balance of capital account on the appropriate side and the current assets and liabilities. In the case of electricity supply companies total of the [illegible] on the assets side and the total [illegible] in the usual [illegible] fund, current liabilities and other credit balances and on the *right hand side the floating* assets and other debit balances.

Prescribed forms. As problems given in the examinations are still based on the old forms, both the old and the new forms are given for the convenience of students.

A. OLD FORMS

The forms given below are the statutory forms under the Indian Electricity Act of 1910.

REVENUE ACCOUNT

For the year ending......

	Rs.		Rs.
A. Generation			
1. To Fuel		1. By Sale of energy for lighting	
2. To Oil wastage, water etc		2. By Sale of energy for power	
3. To Salary of engineers		3. By Sale of energy under special contracts	
4. To Wages and gratuities		4. By Public lighting	
5. To Repairs and maintenance		5. By Rental of meters	
......		6 By Rent receivable	
......		7. By Transfer fees	
B. Distribution		8. By Other items	
		9. By Miscellaneous receipts	
1. To Salary of engineer.		10. By Sale as ashes	
2. To Wages and gratuities		11. By Reconnection and dis-connection fees	
3. To Repairs and maintenance			
......			
......			
C. Public Lamps			
1. To Attendance and Repairs			
2. To Renewals			
D. Rent, Rates and Taxes			
1. To Rents Payable			
2. To Rates and Taxes			
E. Management Expenses			
1. To Director's Remuneration			
2. Management			
3. To General Establishment			
4. To Auditor of the Company			
F. Law Charges			
1. To Law Charges			
G. Depreciation			
1. To Lease			
2. To Buildings			
3. To Plant			
4. To Mains			
5. To Meters etc.			
......			
......			
H. Special Charges			
1 To Bad Debts			
To Balance carried to Net Revenue Account			
Rs.		Rs.	

RECEIPTS AND EXPENDITURE ON CAPITAL ACCOUNT

For the year ended .....

Expenditure	*Expenditure up to end of previous year*	*Expenditure during the year*	*Total Expenditure*	*Receipts*	*Receipts up to the end of previous year*	*Receipts during the year*	*Total receipts*
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
To Preliminary Expenses				By Ordinary shares			
To Land				By Preference shares			
To Building				By Debentures			
To Plant				By Loans			
To Mains				By Calls in advance			
To Transformers, motors etc.,				By Other receipts			
To Meters							
To General stores							
To Special items							
......							
......							
Total expenditure				Total Receipts			
To Balance of capital account carried to general balance sheet				By Balance of capital account carried to general balance sheet			

GENERAL BALANCE SHEET

As at .

Liabilities	Rs.	*Assets*	Rs.
To Capital account		By Capital account	
To Sundry creditors for capital expenditure		By Stores in hand	
To Sundry creditors on open account		By Sundry debtors	
To Net revenue account		By Preliminary expenses	
To Reserve Fund		By Securities	
To Depreciation Fund		By Special items	
To Special items		By Cash at bank	
		By Cash in hand	
Rs.		Rs.	

NET REVENUE ACCOUNT

For the year ending......

	Rs		Rs.
To Balance from last year's account		By Balance from last years account	
To Interest on loans		By Balance brought from revenue account	
To Contingency reserve		By Interest on bank account	
To Interest on debentures		By Balance carried to general balance sheet	
To Dividends			
To Balance carried to general balance sheet			
Rs.		Rs.	

Illustration 1. From the following balances as on December 31, 1970, appearing in the ledger of the Electric Light and Power Co Ltd you are required to prepare: (*a*) revenue account, (*b*) net revenue account, (*c*) capital account, and (*d*) general balance sheet.

	Rs.		Rs.
Equity share	54,900	Stores on hand	700
Debentures	20,000	Cash	300
Lands on 31-12-1969	15,000	Cost of generating electricity	3,000
Lands purchased during 1970	500	Cost of distributing electricity	600
Machinery on 31-12-1969	60,000	Rent, rates and taxes	400
Machinery purchased during 1970	500	Management expenses	1,200
Mains including cost of laying 31-12-1969	20,000	Depreciation	2,000
Spent on mains during 1970	5,100	Sale of current	13,200
Sundry creditors	100	Rent of meters	300
Depreciation fund	25,000	Interest on debentures	1,000
Sundry debtors for current supplied	4,000	Dividends	2,000
Other debtors	50	Balance of net revenue account, 13-12-1969	2,850

(Adapted from B. Com., Andhra, 1970)

Solution :

REVENUE ACCOUNT

For the year ended December 31, 1970

	Rs.		Rs.
Cost of generating electricity	3,000	By Sale of current	13,200
Cost of distribution of electricity	600	By Rent of meters	300
Rent, rates and taxes	400		
Management expenses	1,200		
Depreciation	2,000		
Balance carried to net revenue account	6,300		
Rs.	13,500	Rs.	13,500

NET REVENUE ACCOUNT

For the year ended December 31 1970

	Rs.		Rs.
Interest on debentures	1,000	By Opening balance b/d	2,850
Dividends	2,000	By Revenue account, profit made during the year	6,300
Balance carried to general balance sheet	6,150		
Rs.	9,150	Rs.	9,150

RECEIPTS AND EXPENDITURE ON CAPITAL ACCOUNT

For the year ended December 31, 1970

Expenditure	Expenditure up to the end of previous year	Expenditure during the year	Total expenditure	Receipts	Receipts up to the end of previous year	Receipt during the year	Total receipts
	Rs	Rs.	Rs.		Rs	Rs	Rs
To Lands	15,000	500	15,500	By Equity capital	54,900	—	54,900
To Machinery	60,000	500	60,500	By Debentures	20,000	—	20,000
To Mains	20,000	5,100	25,100				
					74,900	—	74,900
				By Balance of capital account			26,200
Total	95,000	6,100	1,01,100	Total	74,900	—	1,01,100

GENERAL BALANCE SHEET

As on December 31, 1970

Liabilities	Rs	Assets	Rs.
[illegible]	[illegible]	[illegible]	[illegible]
		Cash	300
Rs.	1,06,150	Rs.	1,06,150

Illustration 2. The following is the trial balance of The Social Electric Lighting Co. Ltd. for the year ended December 31, 1970 :

Dec. 31, 1969		Dec. 31, 1970 Dr.	Cr.
	Nominal capital 10,000 shares of Rs. 50 each		
1,00,000	Subscribed—5,000 shares, Rs. 25 paid		1,25,000
75,000	Debentures, 6% interest		75,000
5,600	Depreciation fund		5,000
—	Calls in arrears	5,000	
46,500	Freehold land	46,500	
20,000	Buildings	25,000	
30,000	Machinery at station	50,000	
25,000	Mains	40,000	
5,000	Transformers, Motors, etc.	10,000	
2,500	Meters	7,500	
1,500	Electrical instruments	2,000	
8,000	General stores (cables, mains, etc.) in stock	11,750	
2,250	Office furniture	1,250	
	Coal and fuel	9,500	
	Oil, waste and engine room stores	3,750	

Coal, oil waste, etc. in stock	500	
Repairs and replacements	2,500	
Rates and taxes	1,500	
Salaries of secretary, manager, etc.	7,500	
Wages at station	15,000	
Directors' fees	5,000	
Stationery, printing and advertising	3,000	
Incidental expenses	500	
Law charges	1,000	
Sales of meters		43,750
Sales by contracts		25,000
Meter rents		1,500
Sundry creditors		5,000
Sundry debtors	15,000	
Cash in hand and at bank	16,500	
	Rs. 2,80,250	2,80,250

(1) Provide depreciation on :

Building $2\frac{1}{2}\%$; Machinery $7\frac{1}{2}\%$; Mains 5% ; Transformers etc. 10%, Meters 15%.

(2) A call of Rs. 5 per share was payable on 30th June, 1970 and arrears are subject to interest at 5% per annum.

Prepare revenue account and capital account for the year ended December 31, 1970 and balance sheet as on that date.

(B. Com., Madras, 1971)

REVENUE ACCOUNT

For the year ended December 31, 1970

		Rs.		Rs.
To Coal and fuel		9,500	By Sales of meters	43,750
To Oil waste and engine room stores		3,750	By Sales by contracts	25,000
To Salaries		7,500	By Meter rents	1,500
To Wages		15,000		
To Directors' fees		5,000		
To Stationery, etc.		3,000		
To Incidental expenses		500		
To Law charges		1,000		
To Rates and taxes		1,500		
To Repairs and replacements		2,500		
To Depreciation :				
Building	500			
Machinery	2,250			
Mains	1,250			
Transformers	500			
Meters	375			
		4,875		
To Balance carried forward to general balance sheet		16,125		
		Rs. 70,250		Rs. 70,250

RECEIPTS AND EXPENDITURE ON CAPITAL ACCOUNT

For the year ended December 31, 1970

Expenditure	*Expenditure at the end of previous year*	*Expenditure during the year*	*Total expenditure*	*Receipts*	*Receipts at the end of previous year*	*Receipt during the year*	*Total receipts*
	Rs.	Rs	Rs.		Rs	Rs	Rs.
To Freehold land	46,500	—	46,500	By Share capital	1,00,000	20,000	1,20,000
To Building	20,000	5,000	25,000				
To Machinery at station	30,000	20,000	50,000	By Debentures	75,000	—	75,000
To Mains	25,000	15,000	40,000				
To Transformers, Motors, etc.	5,000	5,000	10,000				
To Meters	2,500	5,000	7,500				
To Electrical instruments	1,500	500	2,000				
To General stores (Mains, etc)	8,000	3,750	11,750				
To Office furniture	1,250	—	1,250				
Total expenditure	1,39,750	54,250	1,94,000				
Balance			1,000				
Rs.			1,95,000	Rs.	1,75,000	20,000	1,95,000

GENERAL BALANCE SHEET

As an December 31, 1970

Liabilities		Rs.	*Assets*	Rs.
Capital account		[illegible]	[illegible]	1,94,000
Sundry creditors		[illegible]	[illegible]	500
Net revenue			[illegible]	15,000
Depreciation fund :			[illegible]	16,500
Balance	5,000			
Add For 1970	4,875			
		9,875		
Rs.		2,26,000	Rs.	2,26,000

Illustration 3. Lunar Co. Ltd, has an authorised capital of Rs. 10,00,000 divided into 10,000 equity shares of Rs. 100 each. The following is the Trial Balance extracted from the books of the company as on [illegible] December 1978.

Trial Balance

	Dr.	Cr.
	Rs.	Rs.
Equity share capital fully called		[illegible]
Calls in arrears	[illegible]	
6% Debentures		[illegible]
Creditors		[illegible]

Reserve fund		50,000
Debtors	90,000	
Bank	95,000	
Reserve fund investments (market value 53,000)	50,000	
Depreciation fund :		
Machinery		15,000
Buildings		10,000
Vehicles		8,000
Fixtures		2,000
Profit and loss account		62,000
Machinery (1-1-1978)	1,25,000	
Addition during the year	10,000	
Buildings (1-1-1978)	2,00,000	
Additions during the year	25,000	
Stock	2,60,000	
Fixtures	10,000	
Vehicles	50,000	
	9,17,000	9,17,000

You are required to prepare the balance sheet under (*i*) single account system and (*ii*) double account system.

Solution :

(*i*) **Single account system**

BALANCE SHEET *as at 31st December, 1978*

Capital and Liabilities		Rs.	*Property and Assets*		Rs.
Share capital :			Fixed assets :		
Authorised capital :			Buildings	2,00,000	
10,000 equity shares of Rs. 100 each		10,00,000	Additions	25,000	
				2,25,000	
Issued and subscribed capital :			*Less* Dep.	10,000	
6,000 equity shares of Rs. 100 each		6,00,000			2,15,0
			Machinery	1,25,000	
Called up capital :			Additions	10,000	
6,000 equity shares of Rs. 100 each fully called	6,00,000			1,35,000	
Less calls in arrears	2,000		*Less* Dep.	15,000	
		5,98,000			1,20,0
Reserves & surplus :			Fixtures	10,000	
Reserve fund		50,000	*Less* Dep.	2,000	
Profit and loss account		62,000			8,0
Secured loans :			Vehicles	50,000	
6% Debentures		1,00,000	*Less* Dep.	8,000	
Current liabilities :					42,0
Creditors		70,000	Investment :		
			Reserve fund investment (market value 53,000)		50,0
			Current assets :		
			Stock		2,60,0
			Debtors		90,0
			Bank		95,0
		Rs. 8,80,000			Rs. 8,80,0

(*ii*) Double account system

RECEIPTS AND EXPENDITURE ON CAPITAL ACCOUNT
for the year ending 31st December, 1978

Expenditure	*Expenditure up to 31-12-77*	*Expenditure during the year*	*Expenditure up to 31-12-78*	*Receipts*	*Receipts up to 31-12-77*	*Receipts during the year*	*Receipts up to 31-12-78*
To Buildings	2,00,000	25,000	2,25,000	By Equity shares (6,000 shares of Rs. 100 each)	5,98,000	—	5,98,000
To Machinery	1,25,000	10,000	1,35,000	By 6% Debentures	1,00,000	—	1,00,000
To Furnitures	10,000	—	10,000				
To Vehicles	50,000	—	50,000				
Total expenditure	3,85,000	35,000	4,20,000	Total Receipts	6,98,000	—	6,98,000
To Balance c/d			2,78,000				
			6,98,000				6,98,000

GENERAL BALANCE SHEET
as at 31st December, 1978

Liabilities	Rs	*Assets*	Rs.
To Capital account receipts	6,98,000	By Capital account expenditure	4,20,000
To Reserve fund	50,000	By RF Investment (market value Rs. 53,000)	50,000
To Depreciation fund	35,000	By Stock	2,60,000
To Net revenue account	62,000	By Debtors	90,000
To Creditors	70,000	By Bank	95,000
	Rs. 9,15,000		Rs. 9,15,000

B. NEW FORMS

The new forms are prescribed in annexures IV and V of the Indian Electricity Rules, 1956*. Annexure IV deals with technical and financial particulars. Annexure V *deals with forms of* accounts The electricity companies are now required to prepare their accounts in the forms given below. The accounts are to be prepared every year for the year ending 31st March and submitted to the State Governments. After going through the new forms given below, an intelligent student would make out that the capital account as well as revenue account are split into two *statements each and the forms are more detailed* than before The table below gives a ready comparison of the old forms with the forms now current.

Old Forms	*New Forms*
(1) Capital account	(1) Statement of share and loan capital (2) *Statement of capital expenditure*
(2) Revenue account	(3) Statement of operating revenue (4) Statement of operating expenses
(3) Net Revenue account	(5) Statement of net revenue and appropriation account
(4) General balance sheet	(6) General balance sheet

* These rules are framed under the Electricity (Supply) Act of 1948.

There are also other statements which form part of published accounts under 'Electricity Rules, 1956. They are

(5) Statement of provision for depreciation.

(6) Statement of contingency reserve fund

(7) Statement of tariffs and dividend control reserve account.

(8) Statement of consumers rebate reserve account.

(9) Statement of special appropriations permitted by the State Government.

ANNEXURE IV

Summary of Technical and Financial particulars for the year ended 31st March, 19......

[*See Rule 26 (3)*]

A. TECHNICAL—

1. Year of working.
2. Area of supply in square miles.
3. Approximate population in the area of supply.
4. *Installed capacity :*

(*a*) Generating plant (excluding retired plant).

(*i*) Hydraulic	kW
(*ii*) Steam	kW
(*iii*) Internal combustion	kW
Total	kW

(*b*) Receiving Station Transformers — kWA

5. Normal maximum demand on the system — kW
6. kWh generated :

(*i*) Hydraulic	kWh
(*ii*) Steam	kWh
(*iii*) Internal combustion	kWh
Total	kWh

7. kWh used for Generating Station Auxiliaries.
8. kWh purchased from other agencies.
9. kWh available for sale (6−7)+8.
10. kWh supplied free (if any) to officers and staff.
11. kWh supplied free (if any) to offices, canteen, etc.
12. kWh sold.
13. kWh unaccounted for [9−(10+11+12)].

(*a*) (*i*) Coal and/or furnace oil consumed in tonnes.

(*ii*) Average calorific value per kg. of coal and/o furnace oil consumed.

(*iii*) Oil consumed in tonnes.

(*b*) (*i*) Oil consumed in tonnes.

(*ii*) Average calorific value per kg. of oil consumed.

(*iii*) Average cost of oil per tonne.

15. Lubricating oil :

(*a*) Quantity consumed (litres).

(*b*) Average cost per litres.

16. Consumers : No connected load kW.

(*a*) Domestic or residential.

(*b*) Commercial.

(*c*) Industrial.

(*i*) Low and medium voltage.

(*ii*) High and/or extra high voltage.

Total

17. Segregation of kWh sold—

(*i*) Domestic or residential :

*(*a*) Lights and fans.

(*b*) Heating and small power.

(*ii*) Commercial ;

*(*a*) Light and fans.

(*b*) Heating and small power.

(*iii*) Industrial power :

(*a*) Low and medium voltage

(*b*) High voltage.

(*iv*) Public lighting.

(*v*) Traction.

(*vi*) Irrigation.

(*vii*) Public waterworks and sewage pumping.

(*viii*) Supplies in bulk to distributing licensees.

B. FINANCIAL—

1. Share capital (paid-up).
2. Loan capital (other than loans advanced by the State Electricity Board).
3. Licensee's capital (1+2).
4. Total capital expenditure.
5. Capital base [*vide* paragraph XVII (1) of the Sixth Schedule to Electricity (Supply) Act, 1948].

* Including unmetered supply.

6. Reasonable return [*vide* paragraph XVII (9) of the Sixth Schedule to the Electricity (Supply) Act, 1948].
7. Clear profit [*vide* paragraph XVII (2) of the Sixth Schedule to the Electricity (Supply) Act, 1948].
8. Maximum sum permissible for distribution to share and debentureholders [*vide* paragraph II (1) of the Sixth Schedule to the Electricity (Supply) Act, 1948].
9. Actual sum available for distribution to share and debentureholders.
10. Item (9) expressed as a % of item (3).
11. Item (9) expressed as a % of item (4).
12. Item (9) expressed as a % of item (5).
13. Dividend declared for the year :
    (*a*) On ordinary shares.
    (*b*) On preference shares.
14. Market price of shares.
    (*a*) Ordinary shares.
    (*b*) Preference shares.
15. Operating revenues (*vide* Statement III—Annexure V).
16. Operating expenses including depreciation (*vide* Statement IV—Annexure V).
17. Depreciation set apart for the year (*vide* Statement V—Annexure V).
18. Revenue per kWh sold (Overall) (item 15÷kWh sold).
19. Revenue per kWh sold :
    (*i*) Domestic or residential :
        (*a*) Lights* and fans.
        (*b*) Heating and small power.
    (*ii*) Commercial :
        (*a*) Lights* and fans.
        (*b*) Heating and small power.
    (*iii*) Industrial power :
        (*a*) Low and medium voltage.
        (*b*) High voltage.
    (*iv*) Public lighting.
    (*v*) Traction.
    (*vi*) Irrigation.
    (*vii*) Public waterworks and sewage pumping.
    (*viii*) Supplies in bulk to distributing Licensees.
20. Cost per kWh sold (overall) (Item 16÷kWh sold).

* Including unmetered supply.

ANNEXURE V

[See section 11 and rule 26 (3)]

ELECTRIC LICENCE 19......

Date of Commencement of Licence

Name of undertaking.......................................*Year of operation*.......... ....

NO 1.—STATEMENT OF SHARE AND LOAN CAPITAL FOR THE YEAR ENDED 31ST MARCH, 19...

(Applicable to Licences other than Local Authority Licensees)

Description of Capital 1	*Balance at the beginning of the year* Rs. 2	*Receipts during the year* Rs. 3	*Redeemed during the year* Rs. 4	*Balance at the end of the year* Rs. 5	*Remarks* Rs. 6
A—Share Capital:					
Authorised Capital					
...Ordinary shares of Rs each					
...% Preference shares of Rs each					
Ordinary shares of Rs each					
...Ordinary shares of Rs each					
...% Preference shares of Rs. each					
TOTAL PAID UP CAPITAL					
—Capital Reserves					
Share Forfeiture A/c.					
Share Premium A/c					
Other items (to be specified)					
TOTAL CAPITAL RESERVE					
—Loan Capital					
Loan from State Electricity Boards/Debentures of R...					
—Other Capital					
Contributions from consumers including local authorities for service lines and public lighting after the commencement of the Electricity (Supply) Act, 1948. Special items (to be specified).					
TOTAL OTHER CAPITAL					
TOTAL CAPITAL RAISED AND ...					

ANNEXURE V

ELECTRIC LICENCE, 19...

Name of Local Authority.. *Year of Operation*...........

No. I A (I).—STATEMENT OF LOANS RAISED AND REDEEMED FOR THE YEAR ENDED 31st MARCH, 19......

(Applicable to Local Authority Licensees)

Description of loans raised from time to time	*Amount sanctioned*	*Rate %*	*Period of Payment*			*Amount of loan redeemed up to beginning of the year*	*Loan redeemed during the year*	*Total loan redeemed up to the end of the year*	*Balance of loan outstanding at the end of the year*	*Remarks*
			From	*To*	*Amount of annual instalment*					
					Rs.	Rs.	Rs.	Rs.	Rs.	
1	2	3	4	5	6	7	8	9	10	11
TOTAL LOANS RAISED FOR THE ELECTRIFICATION SCHEME										

No. I. A (e)—STATEMENT OF LOAN AND OTER CAPITAL FOR THE YEAR ENDED 31st MARCH, 19......

Particulars	*Balance at the beginning of the year* Rs.	*Received during the year* Rs.	*Redeemed during the year* Rs.	*Balance at the end of the year* Rs	*Remarks*
1	2	3	4	5	6
A. Capital Raised					
Amount of loans outstanding [as per col. 10 of statement I-A (I)]					
Grants and advances made from the general funds of the local authority.					
Grants-in-aid from Government.					
TOTAL CAPITAL					
B. Capital Reserve					
Loan redemption account [as per col. 9 of statement I-A (I)]					
Other items (to be specified)					
TOTAL CAPITAL RESERVE					
C. Other Capital					
Consumers' contributions for service lines after the commencement of the Electricity (Supply) Act, 1948.					
Special items (to be specified).					
TOTAL OTHER CAPITAL					
TOTAL CAPITAL RAISED AND APPROPRIATED (A+B+C)					

ANNEXURE V

ELECTRIC LICENCE, 19...

Year of Operation...........

Name of Local Authority..

No. I A (I).—STATEMENT OF LOANS RAISED AND REDEEMED FOR THE YEAR ENDED 31st MARCH, 19......

(Applicable to Local Authority Licensees)

Description of loans raised from time to time	*Amount sanctioned*	*Rate %*	*Period of Payment*			*Amount of loan redeemed up to beginning of the year* Rs.	*Loan redeemed during the year* Rs.	*Total loan redeemed up to the end of the year* Rs.	*Balance of loan outstanding at the end of the year* Rs.	*Remarks*
			From	*To*	*Amount of annual instalment* Rs.					
1	2	3	4	5	6	7	8	9	10	11
TOTAL LOANS RAISED FOR THE ELECTRIFICATION SCHEME										

No. I. A (e)—STATEMENT OF LOAN AND OTER CAPITAL FOR THE YEAR ENDED 31st MARCH, 19......

Particulars	*Balance at the beginning of the year* Rs.	*Received during the year* Rs.	*Redeemed during the year* Rs.	*Balance at the end of the year* Rs	*Remarks*
1	2	3	4	5	6
A. Capital Raised					
Amount of loans outstanding [as per col. 10 of statement I-A (I)].					
Grants and advances made from the general funds of the local authority.					
Grants-in-aid from Government.					
TOTAL CAPITAL					
B Capital Reserve					
Loan redemption account [as per col. 9 of statement I-A (I)].					
Other items (to be specified).					
TOTAL CAPITAL RESERVE					
C. Other Capital					
Consumers' contributions for service lines after the commencement of the Electricity (Supply) Act, 1948.					
Special items (to be specified).					
TOTAL OTHER CAPITAL					
TOTAL CAPITAL RAISED AND APPROPRIATED (*A+B+C*)					

ECTRIC LICENCE, 19...

No. I A (I).—STATEMENT OF LOANS RAISED AND REDEEMED FOR THE YEAR ENDED 31st MARCH, 19......

Year of Operation............

(Applicable to Local Authority Licensees)

Description of loans raised from time to time	*Amount sanctioned*	*Rate %*	*Period of Payment*		*Amount of annual instalment* Rs.	*Amount of loan redeemed up to beginning of the year* Rs.	*Loan redeemed during the year* Rs.	*Total loan redeemed up to the end of the year* Rs.	*Balance of loan outstanding at the end of the year* Rs.	*Remarks*
			From	*To*						
1	2	3	4	5	6	7	8	9	10	11
TOTAL LOANS RAISED FOR THE ELECTRIFICATION SCHEME										

No. I A (c)—STATEMENT OF LOAN AND OTER CAPITAL FOR THE YEAR ENDED 31st MARCH, 19 .....

Particulars	*Balance at the beginning of the year* Rs.	*Received during the year* Rs.	*Redeemed during the year* Rs.	*Balance at the end of the year* Rs	*Remarks*
1	2	3	4	5	6
A. Capital Raised					
Amount of loans outstanding [as per col. 10 of statement I-A (I)].					
Grants and advances made from the general funds of the local authority.					
Grants-in-aid from Government.					
TOTAL CAPITAL					
B. Capital Reserve					
Loan redemption account [as per col. 9 of statement I-A (I)].					
Other items (to be specified).					
TOTAL CAPITAL RESERVE					
C. Other Capital					
Consumers' contributions for service lines after the commencement of the Electricity (Supply) Act, 1948.					
Special items (to be specified).					
TOTAL OTHER CAPITAL					
TOTAL CAPITAL RAISED AND APPROPRIATED (A+B+C)					

No. II—STATEMENT OF CAPITAL EXPENDITURE FOR THE YEAR ENDED 31st MARCH, 19......

Particulars	*Balance at the beginning of the year* Rs.	*Additions during the year* Rs	*Retirements during the year vide Col. 3 statements II-A* Rs.	*Balance at the end of the year* Rs.	*Remarks*
1	2	3	4	5	6
A. Intangible Assets					
1. Preliminary and Promotional expenses.					
2. Cost of licence.					
3. Other expenses, *e.g.*, expenses incidental to conversion from D.C. to A.C., change of frequency, etc.					
TOTAL INTANGIBLE ASSETS					
B. Hydraulic Power Plant					
1. Land & Rights					
2. Buildings and civil engineering works containing generating plants and equipment.					
3. Hydraulic works forming part of a hydro-electric system including					
(*i*) dams, spillways, weirs, canals, reinforced concrete flumes and syphons.					
(*ii*) reinforced concrete pipe-lines and surge tanks, steel pipe-lines, sluice gates, steel surge tanks, hydraulic control valves, and other hydraulic works.					
4. Water wheels, Generators and ancillary equipment including plant foundations.					
5. Switchgear including cable connections.					
6. Miscellaneous power plant equipment.					
7. Other civil works (to be specified).					
TOTAL HYDRAULIC POWER PLANT					
C. Steam Power Plant					
1. Land & Rights.					
2. Buildings and civil engineering works containing generating plant.					
3. Boiler plant and equipment including plant foundations.					

1	2	3	4	5	6
4. Engines, Turbines, Generators and ancillary equipment including plant foundations.					
5. Water cooling system comprising cooling towers and circulating water.					
6. Switchgear including cable connections.					
7. Miscellaneous power plant and equipment.					
8. Other civil works (to be specified).					
TOTAL STEAM POWER PLANT					
D. Internal Combustion Power Plant					
1. Land & Rights.					
2 Buildings and civil engineering works containing generating plant and equipment.					
3. Engines, Generators and ancillary equipment including plant foundations.					
4. Water cooling system comprising cooling towers and circulating water systems.					
5. Switchgear including cable connections					
6. Miscellaneous power plant and equipment.					
7. Other civil works (to be specified).					
TOTAL INTERNAL COMBUSTION POWER PLANT					
E. Transmission Plant (High or Extra High Voltage)					
1. Land & Rights.					
2. Buildings and structures including civil engineering works containing transmission plant and equipment.					
3 Sub-station transformers, transformer kiosks, sub-station equipment and other fixed apparatus including plant foundations:					
(i) transformers including foundations having a rating of 100 kilovolt amperes and over.					
(ii) Others.					

1	2	3	4	5	6
4. Switchgear including cable connections.					
5. Towers, Poles, Fixtures, Overhead conductors and devices :					
(i) lines on steel or reinforced concrete supports operating at nominal voltages higher than 13·2 kilovolts.					
(ii) other lines on steel or reinforced concrete supports.					
(iii) lines on wood supports.					
6. (i) Underground cables and devices including joint boxes and disconnecting boxes.					
(ii) Cable duct system.					
TOTAL TRANSMISSION PLANT					
F. Distribution Plant—High Voltage					
1. Land & Rights,					
2. Buildings and structures including civil engineering works containing distribution plant and equipment.					
3. (i) Sub-station transformers, transformer kiosks, sub-station equipment and other fixed apparatus including plant foundations.					
(ii) Others.					
4. Switchgear including cable connections.					
5. Towers, Poles, Fixtures, Overhead conductors and devices :					
(i) lines on steel or reinforced concrete supports operating at nominal voltages, higher than 13·2 kilovolts.					
(ii) other lines on steel or reinforced concrete supports.					
(iii) lines on wood supports.					
6. (i) Underground cables and devices including joint boxes and disconnecting boxes.					
(ii) Cable duct system.					
7. Service lines.					
8. Metering equipment.					
TOTAL DISTRIBUTION PLANT (H.V.)					
G. Distribution Plant—Medium and low voltage					
1. Land and Rights.					
2. Buildings and structures including civil engineering works containing civil engineering works containing distribution plant and equipment.					

1	2	3	4	5	6
3. Sub-section transformers, transformer kiosks, sub-station equipment and other fixed apparatus including plant foundation :					
(i) transformers including foundations having a rating of 100 kilovolt amperes and over.					
(ii) Others.					
4. Switchgear including cable connections.					
5. Towers, Poles, Fixtures, Overhead conductors and devices :					
(i) lines on steel or reinforced concrete supports.					
(ii) lines on wood supports.					
6. (i) Underground cables and devices including joint boxes and disconnecting boxes.					
(ii) Cable duct system.					
7. Service lines.					
8. Metering equipment.					
TOTAL DISTRIBUTION (M. & L. V.)					
H. Public Lighting					
1. Street and signal lighting systems					
I. General Equipment					
(Not allocated to other sub-heads)					
1. Land and Rights.					
2. Buildings and structures.					
3. Office furniture and equipment.					
4. Transportation equipment					
5. Laboratory and meter testing equipment.					
6. Workshop plant and equipment.					
7. Tools and work equipment.					
8. Communication equipment.					
9. Miscellaneous equipment.					
TOTAL GENERAL EQUIPMENT					
TOTAL CAPITAL ASSETS IN USE.					

Notes : (1) Capital expenditure on items F7 and G7 should include contributions made by consumers towards service line charges.

(2) Where it is not possible to give segregation of capital expenditure in respect of certain items and where high, medium or low voltage distribution lines are carried on same supports, the combined figures for such items may be given.

(3) Retirement during the year referred to in Col. 4 in respect of :

(i) intangible assets relate to amounts written off during the year.

(ii) tangible assets relate to the original cost of assets transferred to the special account, under Paragraph VII of the Sixth Schedule to the Electricity (Supply) Act, 1948.

No. II-A—STATEMENT SHOWING THE WRITTEN-DOWN COST OF FIXED ASSETS RETIRED ON ACCOUNT OF OBSOLESCENCE, INADEQUACY, SUPERFLUITY, ETC.

Particulars of the Assets	*Written down cost of assets at the beginning of the year*	*Written down cost of assets retired during the year vide col. 4, St. II less column 8, Statement V*	*Written down cost of assets sold during the year*	*Amount realised during the year*	*Excess of sale proceeds over written down cost transferred to "Contingencies Reserve" Account vide col. 4 of Statement VI*	*Annual instalment written-off during the year vide col. 7 Statement VI*	*Balance of written-down cost at the end of the year*
	Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.
1	2	3	4	5	6	7	8

No. III—STATEMENT OF OPERATING REVENUE FOR THE YEAR ENDED 31st MARCH, 19...

Particulars of revenue	*Corresponding amount for the previous year of account* Rs.	*Amount for the year of account* Rs.	*Remarks*
1	2	3	4
A—NET REVENUE BY SALE OF ELECTRICITY FOR CASH AND CREDIT			
1. *Domestic and residential.*			
(*a*) Lights and Fans.			
(*b*) Heating and small power.			
2. *Commercial.*			
(*a*) Lights and Fans.			
(*b*) Heating and small power.			
3. *Industrial.*			
(*a*) Low and Medium voltage.			
(*b*) High voltage.			
4. Public Lighting			
5. Public Water-Works and Sewage pumping,			
6. Irrigation.			
7. Traction.			
8. Supplies in bulk to distributing licensees.			
Total Revenue by sale of electricity.			
B—MISCELLANEOUS REVENUE FROM CONSUMERS			
1. *Rent from*			
(*a*) Meters.			
(*b*) Electric motors, fittings, appliances and other apparatus hired to consumers.			
2. Service connection fees.			
3. Public Lighting Maintenance.			
Total Miscellaneous Revenue from consumers.			
C—OTHER REVENUES			
1. Sale of Stores.			
2. Repair of lamps and apparatus.			
3. Commission for the collection of electricity duty.			
4. Other miscellaneous item (to be specified).			
Total Other Revenue			
TOTAL OPERATING REVENUES			
Deduct			
Total Operating Expenses are per St. IV			
Net surplus or deficit carried to the Net Revenue and Appropriations A/c—St. X.			

No. IV—STATEMENT OF OPERATING EXPENSES FOR THE YEAR ENDE[D]
31st MARCH, 19...

Particulars of expenses	*Corresponding Amount for the previous year of account* Rs.	*Amount for the year of account* Rs.	*Remarks*
1	2	3	4
A. HYDRAULIC POWER GENERATION.			
(*a*) *Operation.*			
1. Water for power.			
2. Lubricants and other consumable stores.			
3. Station supplies and miscellaneous expenses.			
4. Proportion of salaries, allowances, gratuities, etc., of Engineers, Superintendents, Officers, Supervisory and other staff.			
5. Wages and gratuities to labour.			
6. Contributions to Provident Fund or Staff Pension.			
Total Operation			
(*b*) *Maintenance.*			
1. Salaries for supervisory staff.			
2. Buildings and civil engineering works containing generating plant and equipment.			
3. Hydraulic works forming part of a hydro-electric system, including—			
(*i*) dams, spillways, weirs, canals, reinforced concrete flumes and syphons.			
(*ii*) reinforced concrete pipe-lines, and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and other hydraulic works.			
4. Water wheels, generators and ancillary equipment including plant foundations.			
5. Switchgear including cable connections.			
6. Miscellaneous power plant equipment.			
7. Other civil works (to be specified).			
8. Contributions to Provident Fund or staff pensions.			
Total Maintenance			
(*c*) *Depreciation.*			
Depreciation on Hydraulic Power Generating plant and Equipment (from Statement V).			
TOTAL HYDRAULIC POWER GENERATION			
B. STEAM POWER GENERATION			
(*a*) *Operation*			
1. Fuel (excluding sale proceeds of steam, ashes, etc.)			

1	2	3	4

2. Lubricants and other consumable stores.
3. Water (if not charged separately)
4. ...
5. ... es, etc., ... pervisory and other staff.
6. Wages and gratuities to labour.
7. Contributions to Provident Fund or staff pension.

Total Operation

(b) *Maintenance*

1. Salaries for supervisory staff.
2. Building and civil engineering works containing ... and equipment.
3. ...
4. ...
5. Water cooling system comprising cooling tower end circulating water systems.
6. Switchgear including cable connections.
7. Miscellaneous power plant and equipment.
8. Other Civil works (to be specified).
9. Contribution to Provident Fund or staff pensions.

Total Maintenance

(c) *Depreciation*

Depreciation on Steam Power Generating Plant and Equipment (from Statement V)

TOTAL STEAM POWER GENERATION EXPENSES

C. INTERNAL COMBUSTION POWER GENERATION

(a) *Operation*

1. Fuel.
2. Lubricants and other consumable stores.
3. ...
4. ...
5. ... etc. of ... ory and other staff.
6. Wages and gratuities to labour.
7. Contributions to Provident Fund or staff pensions.

Total Operation

(b) *Maintenance*

1. ... for supervisory staff.
2. ... ing ...
3. ... including plant foundations.
4. Water cooling system comprising cooling towers and circulating water systems
5. Switchgear including cable connections.

1	2	3	4
6. Miscellaneous power plant and equipment.			
7. Other civil works (to be specified).			
8. Contributions to Provident Fund or Staff Pension.			
Total Maintenance			
(c) *Depreciation*			
Depreciation on Internal Combustion Power Generating Plant and Equipment (from Statement V).			
TOTAL INTERNAL COMBUSTION POWER GENERATION EXPENSES			
D. POWER PURCHASED :			
TOTAL PRODUCTION EXPENSES (A+B+C+D)			
E. TRANSMISSION (HIGH OR EXTRA HIGH VOLTAGE)			
(a) *Operation and Maintenance*			
1. Proportion of salaries, allowances, gratuities, etc., of Engineers, Superintendents, Officers, supervisory and other staff.			
2. Wages and gratuities to sub-station labour.			
3. Wages and gratuities to labour on lines.			
4. Buildings and structures including civil engineering works containing transmission plant and equipment.			
5. Sub-station transformer, transformer kiosks, sub-station equipment and other fixed apparatus including plant foundations.			
(i) Transformers including foundations having a rating of 100 kilovolt amperes and over.			
(ii) Others.			
6. Switchgear including cable connections.			
7. Towers, Poles, Fixtures, Overhead conductors and devices.			
(i) lines on steel or reinforced concrete supports operating at nominal voltages higher than 13·2 kilovolts.			
(ii) other lines on steel or reinforced concrete supports.			
(iii) lines on wood supports.			
8. (i) Underground cable and devices, joint boxes and disconnecting boxes.			
(ii) Cable duct system.			
9. Contributions to Provident Fund or staff pensions.			
(b) *Depreciation on Transmission Plant and Equipment (from Statement V).*			
Total Transmission Expenses			
F. DISTRIBUTION (HIGH VOLTAGE)			
(a) *Operation and Maintenance*			
1. Proportion of salaries, allowances, gratuities, etc., of Engineers, Superintendents, Officers, supervisory and other staff.			
2. Wages and gratuities to sub-station labour.			
3. Wages and gratuities to labour for mains.			
4. Buildings and structures including civil engineering works containing distribution plant and equipment.			
5. Sub-station transformers, transformer kiosks, sub-station			

1	2	3	4
equipment and other fixed apparatus including foundations.			
(i) transformers including foundations having a rating of 100 kilovolt amperes and over.			
(ii) Others.			
6. Switchgear including cable connections.			
7. Towers, Poles, Fixtures, Overhead conductors and devices ;			
(i) lines on steel or reinforced concrete supports,operating at nominal voltages, higher than 13·2 kilovolts.			
(ii) other lines on steel or reinforced concrete supports.			
(iii) Lines on wood supports.			
8. (i) Underground cables and devices including joint boxes and disconnecting boxes			
(ii) Cable duct system.			
9. Services lines.			
10. Matering Equipment.			
11. Contributions to Provident Fund or Staff Pension.			
(b) *Depreciation on Distribution Plant and Equipment (from Statement V).*			
Total Distribution (H V.) expenses.			
G. DISTRIBUTION (MEDIUM AND LOW VOLTAGE)			
(a) *Operations and Maintenance.*			
1. Proportion of salaries, allowances, gratuities, etc. of Engineers, Superintendents, Officers, supervisory and other staff.			
2. Wages and Gratuities to labour.			
2. Buildings and structures including civil engineering works containing transmission plant and equipment.			
4. Sub-station transformers, transformer kiosks, sub-station equipment and other fixed apparatus including plant foundations.			
(i) transformers including foundations rating of 100 kilovolt amperes and over.			
(ii) others			
5. Switchgear including cable connections,			
6. Towers, Poles, Fixtures, Overhead conductors and devices :			
(i) lines on steel or reinforced concrete supports operating at nominal voltages, higher than 13·2 kilovolts.			
(ii) lines on steel or reinforced concrete supports.			
(iii) Lines on wood supports			
7. (i) Underground cables and devices including joint boxes and disconnecting boxes.			
(ii) Cable duct system.			
8. Service lines			
9. Metering Equipment.			
10. Contributions to Provident Fund or Staff Pension.			
(b) *Depreciation on Distribution Plant and Equipment (from Stateme t V)*			
Total Distribution (M. and L V. Expenses)			

1	2	3	4
H. PUBLIC LIGHTING			
(*a*) *Operation and Maintenance*			
1. Operation and Maintenance.			
2. Renewal of lamps			
(*b*) *Depreciation on P.L. system & equipment (from Statement V).*			
Total Public Lighting Expenses.			
CONSUMERS' SERVICING, METER READING, BILLING, CONNECTING, ACCOUNTING, SALES PROMOTING, ETC,			
1 Proportion of salaries, allowances, gratuities etc., of Engineers Secretary, Accountants, other officers, etc.			
2. Meter reading and inspection			
3. Building, Collecting and Accounting.			
4. Exhibitions, Demonstrations and Advertisement.			
5. Merchandising, servicing and contract works.			
6. Miscellaneous expenses			
7. Contribution to Provident Fund or Staff Pensions.			
8. Depreciation on general assets and equipment, which are not allocated to other sub-heads (from Statement V).			
Total Consumers' Servicing, Meter-reading, etc.			
K. GENERAL ESTABLISHMENT CHARGES			
1. Proportion of salaries, allowances, gratuities, etc., of general officers, executives, etc.			
2. Salaries, wages, gratuities, etc., of general office staff.			
3. Contributions to local authority administration for supervision (applicable to local authority licensee only).			
4. Travelling and other expenses of officers and staff.			
5. Rents and Wayleaves.			
6. Rates and Taxes.			
7. General Office expenses and showroom maintenance and supplies			
8. Repairs to office buildings, staff quarters, furniture and fixtures, office equipment, etc., and maintenance.			
9. Depreciation on office and general buildings, furniture, etc., not allocated to other sub-heads, from Statement V).			
10. Audit services :			
(*a*) Auditor of company			
(*b*) Auditor appointed under the provisions of the Act.			
11. Legal services			
12. Insurance expenses			
13. Contributions to Provident Fund or Staff Pensions.			
Total General Establishment Charges.			
L. OTHER CHARGES			
1 Interest paid and accrued on :			
(*a*) Loans advanced by State Electririty Board			
(*b*) Depreciation Fund			
(*c*) Consumers' security deposits			
2. Bad Debts written off.			
3. Other items (to be specified)			
Total Other Charges			
M. MANAGEMENT EXPENSES			
1. Directors' fees and expenses and Debentures, Trustees fee, if any.			
2. Managing Agents' ordinary remuniration			
3. Managing Agents' office allowances			
Total Management Expenses			
TOTAL OPERATING EXPENSES			
TRANSFERRED TO STATEMENT III.			

Notes : (1) No apportioment of expenses under sub-head 'M' be made to any of the salary items under A-(*a*)4, B-(*a*)5, C-(*a*)5, E-(*a*)1, F-(*a*)1, G-(*a*)1, J and K-1 which shall include the proportion of salaries and allowances of persons solely employed for the purpose of the undertaking and of the engineering staff employed by the Managing Agents under tha provisions of sub-para (3) of Para XIII of the Sixth Schedule to the Electricity (Supply) Act 1948.

2. Managing Agents in this context refer to the Managing Agents appointed the Companies Act, 1956. (*N.B.* with the abolition of managing agency there can be nomanaging agents now.)

No. V—STATEMENT OF PROVISION FOR DEPRECIATION FOR THE YEAR ENDED 31st MARCH, 19...

Description of assets in Groups as per Statement II	*Balance of accrued depreciation brought forward from last account*	*Balance of arrears of depreciation brought forward from last account*	*Additions during the year*				*With, drawals during the year vide column 5 statements II A*	*Balance of accrued depreciation carried over to next account*	*Balance of arrears of depreciation carried over to next account*	*Remarks*
			Interest @ 4% per annum on the balance at the beginning of the year under paragraph VI (1) of the Sixth Schedule to the Electricity (Supply Act, 1948	*Depreciation provided for the year*	*Arrears of depreciation written off during the year*	*Total*				
	Rs	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	2	3	4	5	6	7	8	9	10	11
A. Hydraulic Power Plant										
B Steam Power Plant										
C. Internal Combustion Power Plant										
D. Transmission Plant High or Extra High Voltage										
E. Distribution Plant—High Voltag										
F. Distribution Plant—Medium and Low Voltage										
G. Public Lighting										
H. General Equipment										
TOTAL										

Notes :—1. Withdrawals from the depreciation account are permissible only to the extent of past provisions made in respect of assets withdrawn from use and transferred during the year to the special account under Paragraph VII of the Sixth Schedule to the Electricity (Supply) Act, 1948.

2. A sum of Rs....... from the accruals in the depreciation account has been invested in securities in pursuance of the

No. VI—STATEMENT OF CONTINGENCIES RESERVE FOR THE YEAR ENDED 31st MARCH, 19......

Particulars	Balance at the beginning of the year	Addition during the year			Withdrawls during the year			Balance at the end of the year	Remarks
		Appropriations during the year	*Additions under paragraph IX of the Sixth Schedule to the Elec. (Supply) Act, 1948 vide Col. 6, Statement II-A*	*Total*	*Instalment under sub-para (3) of paragraph VII of the Sixth Schedule to the Electric (Supply) Act, 1948 vide Col. 7 Statement II-A*	*Expenses and/or compensation under paragraph V of Sixth Schedule to the Electric (Supply) Act, 1948*	*Total*		
	Rs	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1	2	3	4	5	6	7	8	8	10

Note—A sum of Rs....... from the balance of the Contingencies Reserve has been invested under the Provisions of Paragraph IV (2) of the Sixth Schedule to the Electricity (Supply) Act, 1948.

No. VII.—STATEMENT OF TARIFFS AND DIVIDENDS CONTROL RESERVE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 19 ..

Particulars	*Balance at the beginning of the year* Rs.	*Appropriated during the year* Rs.	*Withdrawn during the year (Particulars to be indicated in the Remarks column)* Rs.	*Balance at the end of the year* Rs.	*Remarks*
1	2	3	4	5	6

No. VIII—STATEMENT OF CONSUMERS' REBATE RESERVE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 19...

Particulars	*Balance at the beginning of the year* Rs.	*Distributed to consumers during the year under paragraph II(I) of the Sixth Schedule to the E (S) Act*, 1948 Rs.	*Appropriated during the year* Rs.	*Balance at the end of the year* Rs.	*Remarks*
1	2		4	5	6

No IX—STATEMENT OF SPECIAL APPROPRIATIONS PERMITTED BY STATE GOVERNMENT

Particulars (giving reference to the sanction of the State Govt. permitting the appropriation)	*Balance at the beginning of the year* Rs.	*Additions by way of appropriation during the year* Rs.	*Transfer by way of reappropriation during the year, details to be given in the remarks column* Rs.	*Balance at the end of the year* Rs.	*Remarks*
1	2	3	4	5	6

No. X—STATEMENT OF NET REVENUE AND APPROPRIATION ACCOUNT
FOR THE YEAR ENDED 31ST MARCH, 19...

Corresponding figures of previous year Rs.	*Particulars*	*Amount* Rs.	*Corresponding figures of previous year* Rs.	*Particulars*	*Amount* Rs.
1	2	3	4	5	6
	1 To Balance of loss brought forward from last account. 2. To net operating deficit as per Statement III. 3. To appropriations (applicable to Local Authority Licensee only) :— (*a*) Interest on loan capital. (*b*) Instalment of redemption of loan capital, as per col. 8 of *St.* I-A (*I*). (*c*) General rates. 4. To taxes on income and profits paid. 5. To instalments of write-down in respect of intangible assets. 6. To instalments of contribution towards arrears of *depreciation*, as per Statement V—Column 6. 7. To contribution towards Contingencies Reserve as per Statement VI—Cols. 3			1. By Balance of profit brought forward from last account. 2. By net operating surplus as per Statement III. 3. By interest on securities and investment. 4. By other receipts (non-operating), *e g.*, rents, (*Less* outgoings not otherwise provided, transfer fee, etc., to be specified). 5. By Balance of loss carried over.	

No IX—STATEMENT OF SPECIAL APPROPRIATIONS PERMITTED BY STATE GOVERNMENT

Particulars (giving reference to the sanction of the State Govt. permitting the appropriation)	*Balance at the beginning of the year* Rs.	*Additions by way of appropriation during the year* Rs.	*Transfer by way of reappropriation during the year, details to be given in the remarks column* Rs.	*Balance at the end of the year* Rs.	*Remarks*
1	2	3	4	5	6

No. X—STATEMENT OF NET REVENUE AND APPROPRIATION ACCOUNT
FOR THE YEAR ENDED 31ST MARCH, 19...

Corresponding figures of previous year Rs.	*Particulars*	*Amount* Rs.	*Corresponding figures of previous year* Rs.	*Particulars*	*Amount* Rs.
1	2	3	4	5	6
	1. To Balance of loss brought forward from last account. 2. To net operating deficit as per Statement III. 3. To appropriations (applicable to Local Authority Licensee only) :— (*a*) Interest on loan capital. (*b*) Instalment of redemption of loan capital, as per col. 8 of St. I-A (I). (*c*) General rates. 4. To taxes on income and profits paid. 5. To instalments of write-down in respect of intangible assets. 6. To instalments of contribution towards arrears of depreciation, as per Statement V—Column 6. 7. To contribution towards Contingencies Reserve as per Statement VI—Cols. 3.			1. By Balance of profit brought forward from last account. 2. By net operating surplus as per Statement III. 3. By interest on securities and investment. 4. By other receipts (non-operating), *e g.*, rents, (*Less outgoings not otherwise* provided, transfer fee, etc., to be specified). 5. By Balance of loss carried over.	

1	2	3	4	5	6
	8. To appropriation towards development reserve as per Statement VII—Cols. 4 or 8 or 4 plus 8.				
	9. To appropriation to Tariffs and Dividends Control Reserve, as per Statement VII—Column 3.				
	10. To appropriation to Consumers Rebate Reserve, as per Statement VIII—Column 4.				
	11. To other special appropriation permitted by the State Government, as per Statement IX—Column 3.				
	12. To appropriation towards interest paid and accrued and dividends paid and payable :—				
	(a) Interest on debentures.				
	(b) Interest on other secured loans.				
	(c) Interest on unsecured loans, advances, deposits, bank overdrafts, etc.				
	(d) Dividends on preference share capital.				
	(e) Dividends on ordinary share capital.				
	To B...				

Corresponding figures of previous year Rs.	Particulars	Amount Rs.	Corresponding figures of previous year Rs.	Particulars	Amount Rs.
1	2	3	4	5	6
	1. Capital raised and appropriated—*vide* Statement I or I-A.			1. Capital amount expended on Works in use—Statement II.	
	Reserves and Surplus			*Less*—Accumulated provisions for depreciation—Statement V.	
	2. Non-statutory Reserve.			*Net Block*	
	3. *Contingencies* Reserve Fund as per Statement VI.			2. Balance of written down cost of obsolete, inadequate, etc., assets—Statement II-A.	
	4. Tariffs & Dividends Control Reserve as per Statement VII.			*Current Assets*	
	5. Consumers' Rebate Reserve as per Statement VIII.			3. Capital works in progress.	
	6. Special appropriations (as permitted by the State Govt.) reserve as per Statement IX.			4. Stores and materials in hand—	
				(a) Fuel—Coal and/or oil, etc. at cost.	
				(b) General Stores at or below cost.	
				5. Debtors for amounts paid in advance on account of contracts.	
				6. Sundry debtors for electricity supplied.	

2	3	4	5	6
7. Balance of Net Revenue and Appropriations Account as per Statement X. *Current Liabilities and Provisions* 8. Balances due on construction of Plant, Machinery, etc. 9. Creditors on open accounts (as per schedule attached). 10 Consumers' security deposits. 11. Accounts payable (to be specified). 12. Temporary accomodations, Bank overdraft and other finances. 13. Other accrued liabilities (to be specified). 14. Contingent liabilities and outstanding commitments, if any, to be stated on the face of this balance sheet.			7. Other debtors (as per schedule attached). 8. Accounts receivable (to be specified). 9. Investments in statutory securities at cost. (*a*) Contingencies Reserve Fund investment (Market value on closing date). (*b*) Depreciation Reserve Fund investment. (Market value on closing date). (*c*) Other investments. (Market value on closing date). 10. Special deposits. (*a*) In respect of taxation. (*b*) Others (to be specified). 11. Balance at Bank : (*a*) Deposit Account. (*b*) Current account and at Call. 12. Cash in hand. *Debit Balances* 13. Net Revenue and Appropriations Account Balance at debit thereof—Statement X. 14. Deferred payments.	

Illustration 4. The following is the Trial Balance of Electric Light and Power Company Ltd as at 31st March, 1977. Prepare the final accounts

(*i*) using the old forms.

(*ii*) using the Statutory Forms prescribed by Electricity Rules, 1956

TRIAL BALANCE

As on 31st March, 1977

	Dr. Rs.	*Cr.* Rs.
Preliminary expenses	10,000	
Cost of licence	15,000	
Buildings	3,50,000	
Plant	4,50,000	
Mains	1,75,000	
Tools and instruments	20,000	
Transformers	1,00,000	
Meters	50,000	
Furniture and fixtures	60,000	
Share capital		4,00,000
8% Debentures		3,00,000
Sundry creditors		35,000
Reserve fund		1,00,000
Reserve fund investment	1,00,000	
Sales of ashes		5,000
Rent and taxes	10,000	
Fuel oil, waste, etc., at generation station	1,25,000	
Wages at plant	1,20,000	
Distribution wages	40,000	
Meter rent		30,000
Balance of net revenue A/c		40,000
Transfer fee		1,000
Depreciation fund		1,50,000
Bad debts	1,000	
Law charges	4,000	
Cash in hand	10,000	
Cash at bank	60,000	
Sundry debtors	27,000	
Fixed deposit with banks	50,000	
Management expenses	24,000	
Directors' remuneration	6,000	
Auditors remuneration	2,000	
Stores in hand	20,000	
Repairs – Generation plant	4,000	
—Distribution	2,000	
Prepaid expenses	2,000	
Street lighting expenses	60,000	
Sale of energy for lighting		4,50,000
Sale of energy for power		3,10,000
Sale of energy for under special contracts		1,50,000
Miscellaneous receipts		[illegible]

Salaries of engineers and staff		
—Generation	40,000	
—Distribution	15,000	
—Office	20,000	
	19,72,000	19,72,000

Additional Information

(1) Additions to fixed assets and capital during the year :

	Rs.
Buildings	50,000
Plant	1,20,000
Mains	25,000
Share capital	1,00,000

(2) Depreciation to be provided for the year :

Buildings	30,000
Plant	35,000
Mains	25,000
Meters	5,000
Transformers	10,000
Tools and instruments	2,000
Furniture and fixtures	5,000

(3) Interest on debentures to be provided for one year.

(4) Provide for incom tax Rs. 30,000

(5) Transfer to reserve fund Rs. 15,000

Solution. (*i*) Using old forms.

REVENUE ACCOUNT

For the year ended 31st March, 1977

	Rs.		Rs.
A. Generation			
To Fuel, oil and waste	1,25,000	By Sale of energy for lighting	4,50,000
To Salary of engineers	40,000	By Sale of energy for power	3,10,000
To Wages	1,20,000	By Sale of energy under special contracts	1,50,000
To Repairs	4,000	By Meter rent	30,000
B. Distribution		By Sale of ashes	5,000
To Salary of engineers	15,000	By Transfer fees	1,000
To Wages	40,000	By Miscellaneous receipts	1,000
To Repairs	2,000		
C. Public Lamps			
To Street lighting expenses	60,000		
D. Rent, Rates and Taxes			
To Rent and Taxes	10,000		
E. Management Expenses			
To Directors' remuneration	6,000		
To Management expenses	24,000		
To Salaries of office staff	20,000		
To Auditors remuneration	2,000		

F. Law Charges			
To Law charges	4,000		
G. Depreciation			
To Buildings	30,000		
To Plant	35,000		
To Mains	25,000		
To Meters	5,000		
To Transformers	10,000		
To Tools and investments	2,000		
To Furniture and fixtures	5,000		
H. Spl. charges			
To Bad debts	1,000		
	5,85,000		9,47,000
To Balance carried to net revenue account	3,62,000		
	9,47,000		9,47,000

NET REVENUE ACCOUNT

	Rs		Rs.
To Interest on debentures	24,000	By Balance from last account	40,000
To Reserve fund	15,000	By Balance from revenue A/c	3,62,000
To Income tax	30,000		
To Balance carried to general balance sheet	3,33,000		
Rs.	4,02,000	Rs.	4,02,000

CAPITAL ACCOUNT

For the year ended 31st March, 1977

Expenditure	*Expenditure up to 31-3-76*	*Expenditure during the year*	*Expenditure up to 31-3-77*	*Receipts*	*Receipts up to 31-3-76*	*Receipts during the year*	*Receipts up to 31-3-7*
	Rs	Rs.	Rs.		Rs.	Rs.	Rs.
To Preliminary expenses	10,000	—	10,000	By Share capital	3,00,000	1,00,000	4 00,00
To Cost of licence	15,000	—	15,000	By Debentures			
To Building	3,00,000	50,000	3,50,000		3,00,000	—	3,00,00
To Plant	3,30,000	1,20,000	4,50,000				
To Mains	1,50,000	25,000	1,75,000				
To Tools and Investments	20,000	—	20,000				
To Transformers	1,00,000	—	1,00,000				
To Meters	50,000	—	50,000				
To Furniture and fixtures	60,000	—	60,000				
Total expenditure	10,35,000	1,95,000	12,30,000	Total Receipts	6,00,000	1,00,000	7,00,00
				By Balance of capital account			5,30,00
			12,30,000				12,30,00

GENERAL BALANCE SHEET

as at 31st March, 1977

Liabilities	Rs	Assets	Rs.
To Capital A/c receipts	7,00,000	By Capital A/c—expenditure	12,30,000
To Sundry creditors	35,000	By Stores in hand	20,000
To Net Revenue account	3,33,000	By Sundry debtors	27,000
To Reserve fund	1,15,000	By Reserve fund investments	1,00,000
To Depreciation fund	2,62,000	By Fixed deposit with banks	50,000
To Provision for income tax	30,000	By Prepaid expenses	2,000
To Interest on debentures outstanding	24,000	By Cash at bank	60,000
		By Cash in hand	10,000
	Rs. 14,99,000		Rs. 14,99,000

(*ii*) Under the new forms prescribed by the Electricity Rules, 1956.

STATEMENT No. I.

STATEMENT OF SHARE AND LOAN CAPITAL

for the year ended 31st March, 1977

[illegible] *of Capital*	*Balance at the beginning of the year* Rs.	*Receipts during the year* Rs.	*Redeemed during the year* Rs.	*Balance at the end of the year* Rs.	*Remarks*
A. *Share Capital*— Authorised, Issued, subscribed shares of Rs. ...each, fully called	3,00,000	1,00,000	—	4,00,000	
	3,00,000	1,00,000	—	4,00,000	
B. *Capital Reserve*	—	—	—	—	
C. *Loan Capital* 8% Debentures	3,00,000	—	—	3,00,000	
	3,00,000	—	—	3,00,000	
D *Other Capital*	—	—	—	—	
Total capital raised and appropriated	6,00,000	1,00,000	—	7,00,000	

STATEMENT No. II

STATEMENT OF CAPITAL EXPENDITURE

For the year ended 31st March, 1977

Particulars	*Balance at the beginning*	*Additions during the year*	*Retirement during the year*	*Balance at the end of the year*	*Remarks*
	Rs.	Rs.	Rs.	Rs.	
A. Intangible Assets					
Preliminary expenses	10,000	–	–	10,000	
Cost of licence	15,000	–	–	15,000	
	25,000	–	–	25,000	
B. Hydraulic Power Plant					
C. Steam Power Plant					
D. Internal Combustion Power Plant					
Buildings	3,00,000	50,000	–	3,50,000	
Plant	3,30,000	1,20,000	–	4,50,000	
	6,30,000	1,70,000	–	8,00,000	
E. Transmission Plant					
Transformers	1,00,000	–	–	1,00,000	
	1,00,000	–	–	1,00,000	
F. Distribution (H.V.)					
Mains	1,50,000	25,000	–	1,75,000	
Meters	50,000	–	–	50,000	
	2,00,000	25,000	–	2,25,000	
G. Distribution (M. & L.V.)					
H Public Lighting					
I. General Equipment					
Tools and Instruments	20,000	–	–	20,000	
Furniture & fixtures	60,000	–	–	60,000	
	80,000	–	–	80,000	
Total Capital Assets in use.	10,35,000	1,95,000	–	12,30,000	

STATEMENT No. III

STATEMENT OF OPERATING REVENUE
For the year ended 31st March, 1977

Particulars of Revenue	*Corresponding amount for the previous year*	*Amount for the year*	*Remarks*
	Rs.	Rs.	
A. *Net Revenue by Sale of Electricity*			
Domestic and residential		4,50,000	
Industrial		3,10,000	
Special contract		1,50,000	
Total revenue by sale of electricity		9,10,000	
B. *Miscellaneous Revenue from Consumers*			
Rent from meters		30,000	
Transfer fees		1,000	
Total miscellaneous revenue from consumers		31,000	
Other Revenue			
Sale of ashes		5,000	
Miscellaneous receipts		1,000	
		6,000	
Total operating revenue		9,47,000	
Less total operating expenses as per Statement No. IV		5,85,000	
Net Surplus carried to Net Revenue and Appropriation Account Statement X		3,62,000	

STATEMENT No. IV

STATEMENT OF OPERATING EXPENSES

for the year ended 31st March, 1977

Particulars	Corresponding amount in pre-year Rs.	Amount for the year Rs.	Rem
(1)	(2)	(3)	(4
A. Hydraulic Power Generation			
B. Steam Power Generation			
C. Internal Combustion Power Generation			
(*a*) Operation :			
Fuel, oil and waste		1,25,000	
Salary of engineers		40,000	
Wages		1,20,000	
Total operation		2,85,000	
(*b*) Maintenance			
Repairs		4,000	
Total maintenance		4,000	
(*c*) Depreciation			
—Buildings		30,000	
—Plant		35,000	
		65,000	
Total Generation Expenses		3,54,000	
D. Power Purchased			
Total production expenses		3,54,000	
E. Transmission			
(*a*) Operation & maintenance			
(*b*) Depreciation		10,000	
Total transmission expenses		10,000	
F. Distribution (H.V.)			
(*a*) Operation & maintenance			
Salary of engineers		15,000	
Wages		40,000	
Repairs		2,000	
(*b*) Depreciation			
Mains and meters		30,000	
Total distribution expenses		87,000	

(1)	(2)	(3)	(4)
G. Distribution (M. & L.V.)			
H. Public Lighting			
(*a*) Operation and maintenance street lighting expenses		60,000	
Total public lighting expenses		60,000	
J. Consumers' Servicing			
K. General Establishment Expenses			
Salaries of staff		20,000	
Management expenses		24,000	
Auditors		2,000	
Rent and taxes		10,000	
Law charges		4,000	
Depreciation—Furniture		5,000	
,, Tools and Instruments		2,000	
Total general establishment charges		67,000	
L. Other Charges			
Bad debts		1,000	
Total other charges		1,000	
M. Management Expenses			
Directors' remuneration		6,000	
Total management expenses		6,000	
Total operating expenses transferred to Statement No. III.		5,85,000	

STATEMENT No. IX

NET REVENUE AND APPROPRIATION ACCOUNT

For the year ended 31st March, 1977

Corresponding figures of previous year	*Particulars*	*Amount* Rs.	*Corresponding figures of previous year*	*Particulars*	*Amount* Rs.
	To Taxes on income	30,000		By Balance of last year	40,000
	To Interest on debentures	24,000		By Operating surplus as per Statement No. III	3,62,000
	To Reserve fund	15,000			
	To Balance carried over	3,33,000			
		4,02,000			4,02,000

STATEMENT No. XII

GENERAL BALANCE SHEET

as on 31st March, 1977

Corresponding figures in previous year	Particulars	Amount Rs.	Corresponding figures in previous year	Particulars	Amount Rs.
	1. Capital raised and Appropriated—Statement I	7,00,000		1. Capital Expenditure Statement II	12,30,000
	Reserves and Surplus			Less depreciation Fund Statement V	2,62,000
	2 Reserve fund	1,15,000		Net Block	9,68,000
	3 Balance of net revenue account—Statement X	3,33,000		*Current Assets*	
	Current Liabilities and Provisions			2. Stores in hand	20,000
	4. Creditors	35,000		3. Debtors reserve fund	27,000
	5. Interest on debentures outstanding	24,000		4. Investments	1,00,000
	6. Income tax Provision	30,000		5. Fixed deposit with bank	50,000
				6. Prepaid expenses	2,000
				7. Cash at bank	60,000
				8. Cash in hand	10,000
		12,37,000			12,37,000

LEGAL PROVISIONS AFFECTING ACCOUNTS

Some of the important provisions in the Sixth Schedule to the Electricity (Supply) Act, 1948 having a bearing on the preparation of final accounts, etc., are discussed below :

Depreciation : (1) There are two methods of depreciation recognised under the Act. They are (*a*) compound interest method and (*b*) Straight line method.

(2) Under compound interest method an amount which together with 4% interest will amount to 90% of the cost is to be provided over the life of the asset. The estimated life of the asset is given in the Sixth Schedule. If this method is followed interest at the rate of 4% per annum on the opening balance of depreciation reserve must be transferred from the Revenue Account to the Depreciation Reserve Account. The interest will be treated as an expense.

(3) Under the straight line method, 90% of the cost of the asset is written off over the estimated life of the asset.

(4) No depreciation is to be provided when 90% of the cost of the asset is written off or the asset ceased to be available due to obsolescence. inadequacy, superfluity or any other reason.

(5) All sums credited to depreciation reserve are to be invested in the undertaking itself or for the repayment of such loans which *are not* guaranteed under Sec. 66 of the Act.

Contingency Reserve Fund. All Electricity Companies are required to maintain a contingencies reserve to *meet the following items* and any other items as may be approved by the Central *Government :*

(*a*) Expenses on replacement or removal of plant or works, other than expenses normally required for maintenance or renewal.

(*b*) Expenses or loss of profits arising out of accident, strikes or other fortuitous circumstances which the management cannot avoid.

(*c*) Any compensation payable legally for which there is no other provision.

The reserve is built up by making *annual* appropriations from the revenue account. The amounts appropriated may vary from $\frac{1}{4}$ to $\frac{1}{2}$% of the original cost of the fixed assets and the reserve itself should not exceed 5% of the original cost of the fixed assets. The amount is required to be invested in trust securities.

Appropriations

General Reserve : Under Sec. 67 of the Act a general reserve can be created which should not exceed 8% of the original cost of the assets. Annual contribution can be made after providing for interest and depreciation and the amount appropriated should not exceed $\frac{1}{2}$% of the original cost of the fixed assets.

Development Reserve : An amount equal to the amount of income

tax which would have been paid but for the development rebate allow by I.T. authorities has to be transferred to the Development Reser Account. If in any accounting year, the clear profit including the spec appropriation together with the balance in the Tariff's and Dividen Control Reserve account falls short of the reasonable return, the appr priation to this reserve can be reduced by the amount of shortfall. Th reserve is to b [illegible] to t purchaser of [illegible]

Reasonable Return and Disposal of Surplus : In order to avo exploitation of consumers by the electricity undertakings, certain provisio have been made in the Act. According to para 1 of the Sixth Schedul electricity companies have to so adjust their rates that their clear pro in any year does not exceed the reasonable return by more than 20% The terms reasonable return and clear profit have been clearly defined the schedule.

Reasonable Return : It is the sum of the following :

(1) An yield which is equal to bank rate plus two per cent on th capital base.

(2) Income from investments excluding investments against co tingency reserve.

(3) An amount at $\frac{1}{2}\%$ on loss by the State Electricity Boards.

(4) An amount at $\frac{1}{2}\%$ on amounts borrowed from approved institu tions.

(5) An amount at $\frac{1}{2}\%$ on debentures issued.

(6) An amount at $\frac{1}{2}\%$ on the balance of Development Reserve.

Capital Base : Procedure for calculating capital base is given below

	Rs.	Rs.
(1) Original cost of the fixed assets available	...	
Less : Cost of service lines contributed by consumers	..	..
(2) Cost of intangible assets		...
(3) Investments made compulsorily on account of contingency reserve		...
(4) Original cost of W.I.P.		...
(5) Working capital being the monthly average of stores, materials, cash and bank balance		..
Total		
Less :		
(1) Depreciation on tangible assets and amounts written off from the intangible assets	..	
(2) Loans advanced by Electricity Boards	..	
(3) Security deposits of customers held in cash	...	

(4)	Debentures issued by the company	...	
(5)	Loans borrowed from approved institutions	...	
(6)	Balance in the Tariffs and Dividends Control Reserve	...	
(7)	Balance in the Development Reserve	...	
(8)	Balance in the Consumer Benefit Reserve	...	
	Capital Base		

Clear Profit : It is the difference between the amount of income and expenditure and reduced by specific appropriations. The layout of items for calculating this figure is given below :

Income derived from	Rs.	Rs.
1. Receipts from sale of energy less discount		...
2. Rental of meters, etc.		...
3. Sales and repair of lamps		...
4. Rent		...
5. Transfer fees		...
6. Interest from investments, fixed and call deposits and bank balances		...
7. Other taxable receipts		...
Less : Expenditure incurred on		
1. Generation and purchase of energy	...	
2. Distribution and sale of energy	...	
3. Rents, rates and taxes	...	
4. Interest on loans	...	
5. Interest on security deposits	...	
6. Bad debts	...	
7. Audit fees	...	
8. Management	...	
9. Depreciation	...	
10. Other admissible expenses for tax purposes	...	
11. Contributions to P.F., Gratuity, etc.	...	
12. Bonus to employees		
Less : Special appropriations		
1. Past losses	...	
2. Taxes on income and profit	...	
3. Amounts written off from intangibles	...	
4. Contributions to contingency reserve	...	
5. Contributions towards arrears of depreciation	...	
6. Contributions to development reserve	...	
7. Other special appropriations permitted by the State Government	...	
	...	...
Balance, being clear profit	...	....

Disposal of Surplus: If the clear profit of an electricity company exceeds the reasonable return, the excess of clear profit over reasonable return must be disposed of as follows:

(*i*) One-third of the surplus but not exceeding 5% reasonable return will be at the disposal of the undertaking as a reward for its efficiency.

(*ii*) Of the balance one-half will be transferred to the tariffs and dividends control reserve.

(*iii*) The balance left will be distributed among the [illegible] way of [illegible] tribution [illegible]

Tariffs and dividends control reserve can be utilised for payment of dividends during years when clear profit is less than the reasonable return. The balance in this account must be handed over to the purchaser at the time of sale of the undertaking. An electricity company must regulate its rates suitably so that the clear profit in any year does not exceed the reasonable return by more than 20% of such return.

Restriction on Dividends: Except with the previous consent of the State Government, no sum shall be carried forward to a reserve and no dividend in excess of 3% shall be paid on share capital and no other distribution of profits shall be made to the shareholders in respect of any year of account so long as any of the following sums remain to be written off in the books of the undertaking, namely,

(*i*) normal depreciation due for that year of account calculated in accordance with the provisions of para VI of Schedule VI to Electricity (Supply) Act, 1948.

(*ii*) equated instalment in respect of arrears of depreciation computed in accordance with the provisions of para XI of Schedule VI, for that year of account.

(*iii*) arrears, if any, in respect of normal depreciation referred to in clause (*a*) above.

(*iv*) arrears, if any, in respect of equated instalments referred to in clause (*b*) above.

Illustration 5. The following balances have been extracted from the books of Kanpur Electricity Company at the end of 1976.

	Rs.
Share capital	10,00,000
Reserve fund (invested in 4½% Government securities at par)	5,00,000
Contingencies reserve (invested in 5% State loan)	1,00,000
Loan from State Electricity Board	6,00,000
8% Debentures	2,00,000
Development reserve	1,00,000
Fixed assets	20,00,000
Depreciation reserve on fixed assets	5,00,000
Consumers' deposits	5,50,000

Amounts contributed by consumers for fixed assets	10,000
Intangible assets	50,000
Tariffs and dividends control reserves	50,000
Current assets (monthly average)	2,00,000

The company earns a profit of Rs. 75,000 (after tax) in 1976. Show how the profit is to be dealt with by the company, assuming the bank rate is 9%.

Solution.

Capital base :

		Rs.
Fixed asssets		20,00,000
Less : Depreciation reserve		5,00,000
		15,00,000
Intangible assets		50,000
Current assets		2,00,000
Investment against contingency reserve		1,00,000
Total		18,50,000
Less : Loan from State Electricity Board	6,00,000	
Debentures	2,00,000	
Development reserve	1,00,000	
Consumers' deposits	5,50,000	
Amounts contributed by consumers for fixed assets	10,000	
Tariff and dividend control reserve	50,000	
		15,10,000
		3,40,000

Reasonable Return :

11% *i.e.* (Reserve Bank Rate 9%+2%) on Rs. 3,40,000	37,400
$4\frac{1}{2}$% on Reserve Fund Investment	22,500
$\frac{1}{2}$% on Electricity Board Loan, Debenture and Development Reserve.	4,500
	64,400

Maximum profit allowed for the company is Rs. 64,400+20% of Rs. 64,400, *i.e.*, Rs. 77,280. The company has earned a profit of Rs. 75,000.

Surplus earned $= 75{,}000 - 64{,}400$
$= 10{,}600$

Disposal of profit including the surplus

(*i*) To be retained by the company	Reasonable returns plus ⅓rd of the surplus not exceeding 5% of reasonable return. =Rs. 64,400+5% of 64,400 =Rs. 67,620.
(*ii*) To be transferred to Tariffs and Dividends Control Reserve	=One-half of the balance =½ of (Rs. 10,600−3,220) =Rs. 3,690.
(*iii*) To be distributed among consumers by way of reduction of rates or otherwise	=The balance, *i.e.*, =Rs. 3,690.

Repairs and Renewals

[illegible] repairs and renewals are charged [illegible] The [illegible] ent in [illegible] use of the asset may be more or less the same. [illegible] years may be high since the charge for repairs and renewals during these years will be negligible. As the asset becomes older the charge for repairs and renewals will be heavy and hence the profits of later years will be unduly reduced.

To equalise the burden to [illegible] have a uniform charge to revenue in respect [illegible] maintain a repairs and renewals [illegible] account by debiting the revenue account and crediting the repairs and renewals reserve account. The amount that is likely to be spent on repairs each year on an average during the life of the asset is calculated in advance and it is charged to revenue account annually. The actual repairs are debited to the reserve account and not to the revenue account. The balance in the 'repairs and renewals reserve' account is shown in the general balance sheet.

Illustration 6. The following particulars are available from the books of Hasan Electricity Company.

	Rs.
Balance of repairs and renewals reserve account as on 1st April 1975	1,20,000
Actual repairs incurred during the year ended	
31st March 1976	75,000
31st March 1977	35,000

The company transfers annually a sum of Rs. 50,000 to the 'repairs and renewals' reserve account.

Draw up the account for the years 1975-76 and 1976-77.

Solution.

REPAIRS AND RENEWALS RESERVE ACCOUNT

		Rs.			Rs.
1976 March 31	To Repairs and renewals	75,000	1975 April 1	By Balance b/d	1,20,000
—do—	To Balance c/d	95,000	1976 March 31	By Revenue account	50,000
		1,70,000			1,70,000
1977 March 31	To Repairs and renewals	35,000	1976 April 1	By Balance b/d	95,000
—do—	To Balance c/d	1,10,000	1977 March 31	By Revenue account	50,000
		1,45,000			1,45,000
			1977 April 1	By Balance b/d	1,10,000

REPLACEMENT OF AN ASSET

Under single account system which we have discussed so far, book value of the old asset was written off when such an asset was replaced by another. Any amount spent on the new asset was capitalised. Under the double account system a different procedure is adopted in this regard. When an asset is abandoned due to obsolescence or any other reason, there is no need to write off such loss. The asset continues to be in the books at original cost. Once an asset appears in the capital account at a certain figure, its value is not reduced. However its value may be increased as a result of extensions and additions to the asset.

Under double account system, therefore, there is a need to allocate the amount spent on replacement of an asset to capital representing the value of extension and to revenue representing the actual replacement of the original asset. It is wrong to capitalize the whole amount spent in such cases. The procedure to be followed is summarised below.

(*a*) The original cost of the asset is not touched.

It continues to appear in the books even after its replacement.

(*b*) Under this system the estimated cost of the replacement of the old asset (in the original form) is calculated. In other words, an estimate is made as to what that old asset (which is to be replaced now) would cost if it is to be constructed now in the same old form. This estimated cost is reduced by the sale proceeds of old materials or by the value of material reused in the new construction. The amount left is charged to revenue account.

(*c*) The difference between the *total* cost of the work and the *estimated replacement cost* (without being further reduced by the amount of material used or sold) of the old asset (in the original form) is capitalised.

The accounting entries will be—

(1) For the amount spent on new works.
Debit New works account (with the amount to be capitalised)
Debit Replacement account (with the amount to be written off to revenue)
Credit Bank account (Actual amount spent)

(2) For the sale of old materials :
Debit Bank account
Credit Replacement account

(3) For the value of old materials used in the construction :
Debit New works account
Credit Replacement account

(4) Amount entirely spent on extensions :
Debit New works account
Credit Bank account

Illustration 7. A power house originally built for Rs. 4,00,000 is to be replaced by a new one. The total cost of the construction is Rs. 14,00,000. *But the estimated cost of construction of the original size power house* is Rs. 6,00,000. Find out the amount to be charged to revenue and capital.

Solution.

		Rs.	
(*a*)	Estimated cost of replacement of the *original* power house	6,00,000	(Revenue charge)
(*b*)	Total cost of construction	14,00,000	
	Less : Estimated cost of replacement	6,00,000	
		Rs. 8,00,000	(Capital charge)

Illustration 8. What shall be amount to be charged to revenue and [illegible] Rs. 12,000 and sale proceeds [illegible] of old material [illegible]

Solution.

(*a*) *Calculation of revenue charge* :

		Rs.
Estimated cost of replacement of original asset		6,00,000
Less : Cost of material reused	Rs. 12,000	
Sale proceeds of material sold	8,000	20,000
Net revenue charge		Rs. 5,80,000

(*b*) *Calculation of capital charge* :

Total cost of construction	14,00,000
Less : Estimated cost of original asset to be replaced	6,00,000
Net amount to be capitalised	Rs. 8,00,000

Cost of material reused and sale proceeds of old material makes difference only in calculation of revenue charge. Capitalization is not at all affected by these transactions.

Illustration 9. The directors of the New Talkies Ltd having received complaints from their Sound Engineer regarding the defective audiography of their cinematographic machinery decided to replace it by one of greater capacity and power. The old machinery was obtained at the cost of Rs. 20,000 but the cost has in the meantime increased by 50% in the aggregate. The new machinery, it is estimated, would cost Rs. 50,000 and the old machinery would realise Rs. 5,000 only.

You are required to allocate the cost of Rs. 50,000 between capital and revenue expenditure and to give the necessary journal entries for recording the above transactions in the books of the company. Also show machinery account. (B. Com., Mysore, 1971)

Solution.

Calculation of revenue charge :		Rs.
Estimated cost of replacement of old machine (Rs. 20,000+50% of 20,000)		30,000
Less : Realisation value of machine :		5,000
Revenue charge	Rs.	25,000
Calculation of capital charge :		
Total cost of new machine		50,000
Less : Estimated cost of replacement of old machine		30,000
New amount to be capitalised	Rs.	20,000

JOURNAL ENTRIES

			Rs.	Rs.
1.	Replacement account	Dr.	50,000	
	To Cash account			50,000
	(Cash spent on the purchase of new machine)			
2.	Cash account	Dr.	5,000	
	To Replacement account			5,000
	(Sale proceeds of old machine)			
3.	Revenue account (revenue charge)	Dr.	25,000	
	Machinery account (capital charge)	Dr.	20,000	
	To Replacement account			45,000
	(Amount allocated to revenue and capital charges)			

MACHINERY ACCOUNT

To Opening balance	Rs. 20,000	By Balance c/d	Rs. 40,000
To Replacement account	20,000		
	Rs. 40,000		Rs. 40,000

Illustration 10. A gas company rebuilds its works at the cost of Rs. 3,30,000. A part of the works which had cost Rs. 1,30,000 is completely replaced. In making the new works sold material of Rs. 4,600 was reused and material worth Rs. 8,400 was sold away. The cost of labour and material is respectively 15% and 12½% higher now than when the old works were built. The ratio of material and labour in the works is 7 : 3.

You are required to make necessary calculations and give journal entries.

Solution :

(a) *Calculation of new estimated cost of original asset :*

	Total Rs.	*Ratio*	*Material* Rs.	*Labour* Rs.
Cost of original works	1,30,000	7 : 3	91,000	39,000
Add : Increase in cost :				
Material 12½% of Rs. 91,000	11,375		11,375	
Labour 15% of Rs. 39,000	5,850			5,850
New estimated cost of original works	1,47,225		1,02,375	44,850

(b) *Calculation of revenue charge :*

Estimated cost of original works		1,47,225
Less : Material reused	Rs. 4,600	
Material sold	8,400	13,000
Net charge to revenue		Rs. *1,34,225*

(c) *Calculation of capital charge :*

	Rs.
Cost of total construction	3,30,000
Less : Estimated cost of asset beingreplaced	1,47,225
Value of capitalisation	Rs. 1,82,775

JOURNAL ENTRIES

		Rs.	Rs.
Replacement account Dr.		3,25,400	
To Cash			3,25,400
(Total construction cost	3,30,000		
Less: Material reused	4,600		
Net amount paid in cash	3,25,400)		
Cash		8,400	
To Replacement account			8,400
(Sale proceeds of material sold)			
Revenue account (net charge to revenue) Dr.		1,34,225	
Works account (cost of capitalisation) Dr.		1,82,776	
To Replacement account			3,17,000

Asset will appear in the capital account as follows:

	Original cost Rs.	Amount spent Rs.	Total Rs.
Works	1,30,000	1,82,775	3,12,775

Note: Replacement account will be eliminated by charging the same to revenue.

ASSIGNMENT MATERIAL

Objective Type Questions:

(1) Indicate whether the following statements are 'True' or 'False'.

(*a*) Under double account system depreciation is credited to the asset account concerned.

(*b*) Contingency reserve is to be invested in Trust Securities.

(*c*) The capital account shows the sources of capital and the manner in which it is utilised.

(*d*) Depreciation under double account system is not credited to the assets, but is shown as an accumulated fund in the general balance sheet.

(*e*) Under double account system debentures are shown in the general balance sheet.

(*f*) Premiums on issue of shares and debentures are permanently retained as capital items.

(*g*) In the case of electricity companies the balance from the capital account is shown as an item on the appropriate side of General Balance Sheet.

(*h*) The capital account enables one to know the cost of fixed assets acquired during the year.

(*i*) Under double account system arrears of depreciation must be carried forward and charged to net revenue account.

(*j*) The accounts of the electricity companies must be prepared in accordance with the requirements of Schedule VI to the Companies Act, 1956.

(2) Fill in the blanks.

(*a*) Two methods of depreciation recognised for electricity companies are..............

(*b*) In compound interest method, depreciation reserve must be credited with interest at.............. per annum.

(*c*) The loss in disposing of the discarded asset is charged to ....

(*d*) Contingencies reserve is created until it equals................. per cent of the original cost of fixed assets.

(*e*) Contribution to general reserve should be made until it reaches.............. per cent of the original cost of the asset.

(*f*) Under double account system profit and loss account and

profit and loss appropriation account are respectively called ....and............

(g) Under the double account system, the amount to be written off when an asset is replaced is debited to............account.

(3) Indicate the correct answer:

(a) When an asset is replaced:

(i) the current cost of replacement is written off to revenue.
(ii) the original cost of the asset is written off to revenue.
(iii) the original cost reduced by the amount of depreciation is written off to revenue

(b) Original cost of an asset Rs. 50,000. Present cost of replacement Rs. 6,50,000. Amount spent on replacement Rs. 7,60,000. The amount chargeable to revenue will be:

(i) Rs. 6,50,000.
(ii) Rs. 5,00,000.
(iii) Rs. 7,60,000.

(c) Interest on debentures is shown in:

(i) Revenue account.
(ii) Capital account.
(iii) Net revenue account.

(d) When an asset is replaced any amount realised on sale of old materials will be:

(i) Credited to replacement account
(ii) Credited to asset account
(iii) Credited to revenue account

(e) Cost of licence is shown in the

(i) Capital account.
(ii) Revenue acccount.
(iii) General balance sheet.

(f) Contingencies reserve is created:

(i) to declare dividends during years when profits are inadequate.
(ii) to meet abnormal expenses which are beyond the control of management.
(iii) strengthen generally the financial position of the company.

(g) The essential feature of the double account system is:

(i) for every debit there is a corresponding credit.
(ii) the presentation of capital receipts and capital expenditure in a separate account.
(iii) the presentation of assets at original cost, the depreciation to date being shown to the credit of depreciation reserve account.

(h) Under double account system, depreciation is ;

(i) credited to the asset account.
(ii) Credited to depreciation reserve account.
(iii) None of the above.

Questions :

1. Explain what is double account system. Distinguish it from single account system.

2. State briefly the advantages and disadvantages of double account system.

3. Explain the method of charging depreciation in double account system. Is it different from that which is adopted in single account system?

4. What treatment would you recommend in double account system for (a) Depreciation, and (b) Additions and Alterations ?

(B. Com., North Bengal, 1972)

5. How is reasonable return defined by the Electricity (Supply) Act, 1948 ? Explain how electricity companies should dispose of the surplus of clear profit over reasonable return.

6. Write short notes on :

(a) Contingency reserve, (b) Capital base, (c) Development reserve, (d) Tariffs and dividends control reserve.

Problems

1. The Delhi Electric Co Ltd rebuilt and re-equipped a part of their power-house at a cost of Rs. 80,00,000 ; the part of the old power-house thus superseded had cost originally Rs. 50,00,000 but if erected at the present time would cost 20% more. Rs. 6,00,000 is realised from the sale of old materials and Rs. 3,00,000 worth of old materials are used in the reconstruction and are included in the cost of Rs. 80,00,000 mentioned above. Give necessary entries for recording the above transactions in the books of the company, indicating the allocations between capital and revenue and give reasons for such allocations **(C.A. Final) 33·1**

(Charge to revenue Rs. 51,00,000 ; Additional amount to be capitalised Rs. 20,00,000)

2. A water supply concern had to replace a quarter of the mains and lay an auxiliary main for the remaining length in order to augment supplies of water to a locality. The total cost of the original main was Rs. 4,00,000. The auxiliary main cost Rs. 4,50,000 and the new main cost Rs. 1,75,000. It is estimated that the cost of laying a main has gone up by 30%. Part of the old main realised Rs. 15,000.

Pass journal entries to record the above and show the total amount capitalised and written off. **(B. Com., Andhra, 1971) 33·2**

(Amount charged to revenue Rs. 1,15,000 ; Amount capitalised Rs. 4,95,000)

3. A railway station was built in 1937 at a cost of Rs. 3,00,000. It was replaced in 1968 by a new railway station at a cost of Rs. 16,00,000. Since 1937 prices of materials have risen to 250% and the labour rates

have trebled. The proportion of materials and labour in the old station was 2 : 3. Old materials valued at Rs. 25,000 are used in the construction of the new station and included in the cost of Rs. 16,00,000. Rs. 42,000 is realised by the sale of old materials.

Give journal entries for recording the above transactions.

(B. Com., Mysore, 1972) 33·3

(Charge to revenue account Rs. 7,73,000 ; Amount to be capitalised Rs. 7,60,000)

4. The Bombay Municipal Corporation, having received many

laid. The cost of materials and wages have increased in the meantime by 50% in the aggregate. It is estimated that the laying of larger mains would cost Rs. 30,00,000 and the old mains would realise Rs. 2,50,000. As the capital expenditure is to be met by means of a loan and the revenue expenditure is to be provided from out of revenue, it is necessary to allocate the cost of Rs. 30,00,000 between capital and revenue expenditure.

You are asked to make the allocation. (B. Com , Madras University)

(Charge to revenue Rs. 12,50,000 ; Amount to be capitalised Rs. 15,00,000)

5. Jaipur Electric Supply Company Ltd (which adopts the double account system) re-build and re-equip a power station and the connecting lines during the year 1974. For this purpose they purchased materials of Rs. 10,85,000 and used stores worth Rs. 4,90,000 from their existing stocks. The cost of labour came to Rs. 5,22,000. The estimated supervisory over-heads attributed to this project were Rs. 13,000. The station was erected in 1945 at a cost of Rs. 5,00,000 and the index of costs in this line stood in 1974 at 385, taking 1945 as the base year. Discarded materials from the old station fetched Rs. 12,000.

Show journal entries to record the above transactions and give working notes showing how you arrived at the figures.

(B. Com., Madras, March 1978)

(Charge to revenue Rs. 19,13,000 ; Amount to be capitalsed Rs. 1,85,000)

6. The following are the balances on 31st March 1975 in the books of South Madras Power and Light Co Ltd :

	Dr. Rs.	*Cr.* Rs.
Land on 1st April 1974	60,000	
Lands expended during the year	2,000	
Machinery on 1st April 1974	2,40,000	
Machinery expanded during the year	2,000	
Mains including cost of laying	80,000	
Mains expanded during the year	20,400	
Ordinary shares		2,19,600
Debentures		80,000
Sundry creditors		400
Depreciation account		1,00,000

Sundry debtors for current supplied	16,000	
Other debtors	200	
Cash	2,000	
Cost for generation of electricity	14,000	
Cost of distribution of electricity	2,000	
Rent, Rates and Taxes	2,000	
Management	4,800	
Depreciation	8,000	
Sale of current		52,000
Rent of meters		2,000
Interest on debentures	4,000	
Interim dividend	8,000	
Balance of Net Revenue A/c (April 1, 1974)		11,400
Rs.	4,65,400	4,65,400

From the above trial balances, prepare capital account, general balance sheet, revenue account and net revenue account.

(B. Com., Madras, September 1977)

(Balance on capital account Rs. 1,04,800 ; Revenue Rs. 23,200 ; Net revenue Rs. 22,600 ; General balance sheet total Rs. 4,22,600)

7. The following balances were extracted from the books of Urban Electric Supply Co Ltd as on December 31, 1969. Prepare revenue, net revenue and appropriation accounts and balance sheet in the form prescribed under the Electricity Act :

	Rs.		Rs.
Power purchased	2,83,397	Sundry creditors (consumers)	2,636
Distribution expenses	46,658	Sundry creditors (others)	119
Rates and taxes	15	Consumers' security deposit	1,87,566
General establishment charges	30,407	Depreciation reserve balance	1,28,785
Management expenses	17,730	Contingency reserve balance on 1st January	6,902
Sale of electricity	4,19,434	Services advance	7,957
Meter rent, reconnection fee, etc.	27,546	Unpaid wages	18
Depreciation	18,758	Income-tax reserve	18,244
Income-tax	18,244	Interest payable	11,905
Repairs and maintenance of building	526	Stores in hand	48,852
Contribution towards contingency reserve	3,143	Sundry debtors for supply of electricity	39,219
Interest paid and accrued	6,089	Advances to staff	10,045
Plant and machinery	4,59,968	Cash at bank	7,334
Public lighting	81,665	Cash in hand	1,492
General equipment	15,367		
Capital paid-up	3,55,000		
Bills payable	896		

(C.A. Final) 33·6

(Revenue Rs. 43,400 ; Net Revenue Rs. 43,400 ; Total of general balance sheet Rs. 7,63,942 ; Difference in T.B. Rs. 15,615)

8. The following balances appeared in the books of Universal Electric Supply Corporation Ltd, as on 31st December, 1974 :

	Dr. Rs.	Cr. Rs.
Equity shares		6,00,000
Debentures		2,00,000
Land on 31st December, 1973	1,50,000	
Land purchased during the year	60,000	
[illegible] [illegible]	1,60,000	
Mains expended during the year	76,000	
Machinery on 31st December, 1973	5,50,000	
Machinery purchased during the year	66,000	
Sundry creditors		1,000
Depreciation fund account		2,50,000
Sundry debtors for current supplied	40,000	
Other book debts	500	
Stores on hand	6,000	
Cash in hand	4,000	
Cost of generation of electricity	30,000	
Cost of distribution of electricity	9,000	
Sale of current		1,50,000
Meter rent		5,000
Rent, rates and taxes	12,000	
Establishment expenses	21,000	
Interest on debentures	10,000	
Interim dividend	20,000	
Depreciation	20,000	
Net revenue account balance on 31st December, 1973		28,500
Rs.	12,34,500	12,34,500

From the above balances prepare revenue account, net revenue account, capital account and general balance sheet.

[I.C.W.A (Final) June 1975]

(Balances : Capital account Rs. 2,62 000 ; Revenue account Rs. 63,000 ; Net revenue account Rs. 61,500 ; General balance sheet total Rs. 11,12,500)

9. The following balances are extracted from the books of account of Vidyut Electric Supply Company Ltd, for the year ended 31st March 1976 :

DEBIT BALANCES

	Rs.	Rs.
Licence		9,000
Land (addition during the year Rs. 10,000)		2,10,000
Buildings		12,18,000
Plant and Machinery		2,04,000
Transformer sub station		83,70,000
Mains—Overhead and underground (additions during the year Rs. 17,70,000)		2,84,25,000

House Service Connection (additions during the year Rs. 2,25,000)		32,10,000
Furniture and Fixtures (additions during the year Rs. 21,000)		3,30,000
Motor Lorries (additions during the year Rs. 50,000)		3,15,000
Investments of contingency reserves (in Government securities)		4,80,000
Purchase of energy		62,25,000
Salaries and wages		12,00,000
Repairs and Maintenance :		
Buildings	22,500	
Plant and machinery	7,500	
Transformers	90,000	
Mains and services	5,10,000	
Lorries	18,000	
		6,48,000
Establishment expenses		19,95,000
Rent, rates and taxes		76,500
Conveyance and travelling		60,000
Audit fees		22,500
General expenses		1,50,000
Electricity duty		10,50,000
Directors' fees and allowance		25,500
Interest on fixed loans		3,52,500
Interest on consumers' security deposits		1,20,000
Current assets		33,00,000
Work-in-progress		19,20,000
Sundry debtors		40,50,000
Cash and bank balances		21,00,000
Loans and advances		10,50,000
	Total Rs.	6,71,16,000

CREDIT BALANCES

	Rs.
Share Capital :	
7,50,000 Equity shares of Rs. 10 each	75,00,000
3,00,000 7% Preference shares of Rs. 10 each	30,00,000
Reserve for rebate to consumers	2,11,500
Contingency reserve	4,80,000
Tariff and dividend control reserve	2,10,000
Development reserve	9,18,000
Accumulated depreciation	2,40,00,000
Balance of net revenue account brought forward from previous year	22,500
Loan from State Government (secured by charge on fixed assets)	49,50,000
Loan from State Electricity Board	5,70,000
Sundry creditors	25,74,000
Consumers security deposits	48,00,000

Unclaimed dividends	2,25,000
Sale of energy	1,74,75,000
Rental of meters	1,05,000
Maintenance on public lamps	22,500
Hire on machinery and goods	37,500
Interest on bank accounts	15,000
Total Rs.	6,71,16,000

The following adjustments have to be made :

	Rs.
(1) Depreciation for the year	17,25,000
(2) Provision for taxation	22,80,000
(3) Transfer of contingency reserve	2,25,000
(4) Transfer of development reserve	1,20,000

The amount of reasonable return may be presumed to be Rs. 11,94,000.

You are required to prepare capital account and general balance sheet of the Vidyut Electric Supply Company Ltd under the double account system. (C.A. Final, Nov. 1976)

(Balances : Capital account Rs. 2,62,71,000 ; Revenue account Rs. 20,62,500 ; Net revenue A/c Rs. 12,76,200 Total of the General balance sheet Rs. 5,51,91,000)

10. Gupta Electricity Company earned a profit of Rs. 33,97,000 after paying Rs. 1,20,000 @ 6% as debenture interest for the year ended March 31, 1982. The following further information is supplied to you :

	Rs.
Fixed Assets	7,20,00,000
Depreciation written off	2,00,00,000
Loan from Electricity Board	1,60,00,000
Reserve Fund Investment at par (4%)	40,00,000
Contingency Reserve Investment at par (4%)	30,00,000
Tariff and Dividend Control Reserve	4,00,000
Security Deposits of customers	6,00,000
Customer's contribution to assets	2,00,000
Preliminary expenses	1,60,000
Monthly average of current assets including amount due from customers Rs 10,00,000	30,40,000
Development Reserve	10,00,000

Show the disposal of the profits mentioned above.

(C.A. Final, November 1982)

(The full amount of clear profit is at the disposal of the company).

SUGGESTED READING

1. *Accountancy*—William Pickles
2. Indian Electricity Rules 1956
3. Published Accounts of Electricity Boards

House Service Connection (additions during the year Rs. 2,25,000)		32,10,000
Furniture and Fixtures (additions during the year Rs. 21,000)		3,30,000
Motor Lorries (additions during the year Rs. 50,000)		3,15,000
Investments of contingency reserves (in Government securities)		4,80,000
Purchase of energy		62,25,000
Salaries and wages		12,00,000
Repairs and Maintenance :		
Buildings	22,500	
Plant and machinery	7,500	
Transformers	90,000	
Mains and services	5,10,000	
Lorries	18,000	
		6,48,000
Establishment expenses		19,95,000
Rent, rates and taxes		76,500
Conveyance and travelling		60,000
Audit fees		22,500
General expenses		1,50,000
Electricity duty		10,50,000
Directors' fees and allowance		25,500
Interest on fixed loans		3,52,500
Interest on consumers' security deposits		1,20,000
Current assets		33,00,000
Work-in-progress		19,20,000
Sundry debtors		40,50,000
Cash and bank balances		21,00,000
Loans and advances		10,50,000
	Total Rs.	6,71,16,000

CREDIT BALANCES

	Rs.
Share Capital :	
7,50,000 Equity shares of Rs. 10 each	75,00,000
3,00,000 7% Preference shares of Rs. 10 each	30,00,000
Reserve for rebate to consumers	2,11,500
Contingency reserve	4,80,000
Tariff and dividend control reserve	2,10,000
Development reserve	9,18,000
Accumulated depreciation	2,40,00,000
Balance of net revenue account brought forward from previous year	22,500
Loan from State Government (secured by charge on fixed assets)	49,50,000
Loan from State Electricity Board	5,70,000
Sundry creditors	25,74,000
Consumers security deposits	48,00,000

Unclaimed dividends	2,25,000
Sale of energy	1,74,75,000
Rental of meters	1,05,000
Maintenance on public lamps	22,5^0
Hire on machinery and goods	37,500
Interest on bank accounts	15,000
Total Rs.	6,71,16,000

The following adjustments have to be made :

	Rs.
(1) Depreciation for the year	17,25,000
(2) Provision for taxation	22,80,000
(3) Transfer of contingency reserve	2,25,000
(4) Transfer of development reserve	1,20,000

The amount of reasonable return may be presumed to be Rs. 11,94,000.

You are required to prepare capital account and general balance sheet of the Vidyut Electric Supply Company Ltd under the double account system. (C.A. Final, Nov. 1976)

(Balances : Capital account Rs. 2,62,71,000 ; Revenue account Rs. 20,62,500 ; Net revenue A/c Rs. 12,76,200 Total of the General balance sheet Rs. 5,51,91,000)

10. Gupta Electricity Company earned a profit of Rs. 33,97,000 after paying Rs. 1,20,000 @ 6% as debenture interest for the year ended March 31, 1982. The following further information is supplied to you :

	Rs.
Fixed Assets	7,20,00,000
Depreciation written off	2,00,00,000
Loan from Electricity Board	1,60,00,000
Reserve Fund Investment at par (4%)	40,00,000
[illegible] at par (4%)	30,00,000
[illegible]erve	4,00,000
[illegible]	6,00,000
[illegible]	2,00,000
[illegible]	1,60,000
Monthly average of current assets including amount due from customers Rs. 10,00,000	30,40,000
Development Reserve	10,00,000

Show the disposal of the profits mentioned above.

(C.A. Final, November 1982)

(The full amount of clear profit is at the disposal of the company).

SUGGESTED READING

1. *Accountancy*—William Pickles
2. Indian Electricity Rules 1956
3. Published Accounts of Electricity Boards

SECTION 6

ACCOUNTING For CONSOLIDATION (GROUP ACCOUNTS)

ACCOUNTING For CONSOLIDATION (GROUP ACCOUNTS)

1

Accounts of Holding Companies Consolidated Balance Sheet

Holding company device is a part and parcel of the combination movement in business. As business expands, the businessman tries to acquire more and more control on units supplying raw materials and components as well as agencies engaged in marketing output. Again instead of starting more factories under the same company, it is advantageous to promote new companies for the purpose, in which the parent organisation can acquire controlling interest. The parent organisation acquiring controlling interest in another company is called the Holding Company. The company which is controlled is called Subsidiary Company. There are three ways in which a company A Ltd. may control another company B Ltd. They are :

(1) by holding more than half the shares in B Ltd. having voting power,

(2) by controlling the composition of the Board of Directors of B Ltd., and

(3) by controlling a holding company which controls B Ltd. If B Ltd. is the subsidiary of C Ltd. and C Ltd. is subsidiary of A Ltd., then B Ltd. is also deemed to be the subsidiary of A Ltd.

In many cases the holding company itself may not have any trading interests on its own account. It might be a device to build up a vast industrial empire in which case it will be merely directing the operations of several companies because of its controlling interest. Takeover bids also have been largely responsible for the coming into existence of the holding companies. A takeover bid may be defined as the acquisition of control of a company through the purchase of shares from the market by an outside person or a company. Generally, the purpose of takeover bids is to put the productive assets in the hands of an indifferent management to better use. Such takeover bids did result in several cases in better management of the assets and made the controlled companies prosperous.

The holding company, together with its subsidiaries, is called "the Group", for the purpose of discussion in this book. The provisions of the Companies Act giving definition and other requirements of holding company are given below.

Definition

Section 4 of the Companies Act, 1956 defines subsidiary company. It says that a company is a subsidiary of another if, but only if—

"(*a*) that other company controls the composition of its Board of Directors ; or

(*b*) that other—

(*i*) where the first mentioned company is an existing company in respect of which the holders of preference shares issued before the commencement of this Act have the same voting rights in all respects as the holders of equity shares, exercises or controls more than half of the total voting power of such company ;

(*ii*) where the first mentioned company is any other company, holds more than half in nominal value of its equity share capital ;

(*c*) the first mentioned company is a subsidiary of any company which is that other's subsidiary."

For the purposes of sub-section (*a*), the company is said to be in ontrol of the composition of its Board of Directors if, but only if—

"that other company by the exercise of some power exercisable by it at its discretion without the consent or concurrence of any other person, can appoint or remove the holders of all or a majority of the directorships ; but for the purposes of this provision that other company shall be deemed to have power to appoint to a directorship with respect to which any of the following conditions is satisfied, that is to say—

(*a*) that a person cannot be appointed thereto without the exercise in his favour by that other company of such a power as aforesaid ;

(*b*) that a person's appointment thereto follows necessarily from his appointment as director, or manager of, or to any other office of employment in, that other company ; or

(*c*) that the directorship is held by an individual nominated by that other company or a subsidiary thereof.

However, following points are worth keeping in mind for the purposes of determining whether one company is a subsidiary of another company—

(*a*) any shares held or power exercisable by that other company in a fiduciary capacity shall be treated as not held or exercisable by it ;

(*b*) subject to the provisions of clauses (*c*) and (*d*), any shares held or power exercisable—

(*i*) by any person as a nominee for that other company except where that other is controlled only in a fiduciary capacity, or

(*ii*) by, or by a nominee for, a subsidiary of that other company, not being a subsidiary which is concerned only in a fiduciary capacity ;

shall be treated as held or exercisable by that other company.

(*c*) any shares held or power exercisable by any person by virtue of the provisions of any debentures of the first-mentioned company or of a trust deed for securing any issue of such debentures shall be disregarded ;

(*d*) any shares held or power exercisable by, or by a nominee for, that other or its subsidiary (not being held or exercisable as mentioned in clause (*c*) shall be treated as not held or exercisable by that other, if the ordinary business of that other or its subsidiary, as the case may be, includes the lending of money and the shares are held or the power is exercisable as aforesaid by way of security only for the purposes of a transaction entered into in the ordinary course of that business.

A company shall be *deemed to be the holding company of another* if, but only if, that other is its subsidiary.

Requirements of Section 212

A holding company is required to attach certain documents relating to its subsidiary company. These requirements have been laid down in Section 212 of the Companies Act, which is reproduced here—

212. Balance sheet of holding company to include certain particulars, as to its subsidiaries—(1) There shall be attached to the balance sheet of a holding company having a subsidiary or subsidiaries at the end of the financial year as at which the holding company's balance sheet is made out, the following documents in respect of such subsidiary or of each such subsidiary, as the case may be—

(*a*) a copy of the balance sheet of the subsidiary ;

(*b*) a copy of its profit and loss account ;

(*c*) a copy of the report of its Board of directors ;

(*d*) a copy of the report of its auditors ;

(*e*) a statement of the holding company's interest in the subsidiary as specified in sub-section (3) ;

(*f*) the statement referred to in sub-section (5), if any, and

3. Ins. by s 62, *ibid.*

(*g*) the report referred to in sub-section (6), if any.

(2) [3][(*a*) The balance sheet referred to in clause (*a*) of sub-section (1) shall be made out in accordance with the requirements of this Act,—

(*i*) as at the end of the financial year of the subsidiary, where such financial year coincides with the financial year of the holding company ;

(*ii*) as at the end of the financial year of the subsidiary last before that of the holding company where the financial year of the subsidiary does not coincide with that of the holding company.]

(*b*) The profit and loss account and the reports of the Board of directors and of the auditors, referred to in clauses (*b*), (*c*) and (*d*) of sub-section (1), shall be made out, in accordance with the reqirements of this Act, for the financial year of the subsidiary referred to in clause (*a*)

(*c*) [a]Where the financial year aforesaid] of the subsidiary shall not end on a day which precedes the day on which the holding company's financial year ends by more than six months

(*d*) Where the financial year of a subsidiary is shorter in duration than that of its holding company, references to the financial year of the subsidiary in clauses (*a*), (*b*) and (*c*) shall be construed as references to two or more financial years of the subsidiary the duration of which, in the aggregate, is not less than the duration of the holding company's financial year.

(3) The statement referred to in clause (*e*) of sub-section (1) shall specify—

(*a*) the extent of the holding company's interest in the subsidiary at the end of the financial year or of the last of the financial years of the subsidiary referred to in sub-section (2) ;

(*b*) the net aggregate amount, so far as it concerns members of the holding company and is not dealt with in the company's accounts of the subsidiary profits after deducting its losses or *vice versa*—

(*i*) for the financial year or years of the subsidiary aforesaid ; and

(*ii*) for the previous financial years of the subsidiary since it became the holding company's subsidiary ;

(*c*) the net aggregate amount of the profits of the subsidiary after deducting its losses or *vice versa*—

(*i*) for the financial year or years of subsidiary aforesaid ; and

(*ii*) for the previous financial years of the subsidiary since it became the holding company's subsidiary ;

so far as those profits are dealt with, or provision is made for those losses, in the company's accounts.

(4) Clauses (*b*) and (*c*) of sub-section (3) shall apply only to profits and losses of the subsidiary which may properly be treated in the holding company's accounts as revenue profits or losses, and the profits or losses attributable to any shares in a subsidiary for the time being held by the holding company or any other of its subsidiaries shall not (for that or any other purpose) be treated as aforesaid so far as they are profits or losses for the period before the date on or as from which the shares were acquired by the company or any of its subsidiaries, except that they may in a proper case be so treated where—

(*a*) the company is itself the subsidiary of another body corporate ; and

(*b*) the shares were acquired from that body corporate or a subsidiary of it ; and for the purpose of determining whether any profits or losses are to be treated as profits or losses for the said period, the profit or loss for any financial year of the subsidiary may, if it is not practicable to apportion it with reasonable accuracy by reference to the facts, be treated as accruing from day to day during the year and be apportioned accordingly.

(5) Where the financial year or years of a subsidiary referred to in sub-section (2) do not coincide with the financial year of the holding company, a statement containing information on the following matters shall also be attached to the balance sheet of the holding company :

(*a*) whether there has been any, and, if so, what change in the holding company's interest in the subsidiary between the end of the financial year or of the last of the financial years of the subsidiary and the end of the holding company's financial year ;

(*b*) details of any material changes which have ocurred between the end of the financial year or of the last of the financial years of the subsidiary and the end of the holding company's financial year in respect of—

(*i*) the subsidiary's fixed assets ;

(*ii*) its investments ;

(*iii*) the moneys lent by it ;

(*iv*) the moneys borrowed by it for any purpose other than that of meeting current liabilities.

(6) If, for any reason, the Board of directors of the holding company is unable to obtain information on any of the matters required to be specified by sub-section (4), a report in writing to that effect shall be attached to the balance sheet of the holding company.

(7) The documents referred to in clauses (*e*), (*f*) and (*g*) of sub-section (1) shall be signed by the persons by whom the balance sheet of the holding company is required to be signed.

(8) The Central Government may, on the application or with the consent of the Board of directors of the company, direct that in relation to any subsidiary the provisions of this Section shall not apply, or shall apply only to such extent as may be specified in the direction.

(9) If any such person as is referred to in sub-section (6) of Section 209 fails

to take all resonable steps to comply with the provisions of this section, he shall, in respect of each offence, be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both :

Provided that in any proceedings against a person in respect of an offence under this section, it shall be a defence to prove **** that a competent and reliable person was charged with the duty of seeing that the provisions of this section were complied with and was in a position to discharge that duty :

Provided further that no person shall be sentenced to imprisonment for any such offence unless it was committed wilfully.

(10) If any person, not being a person referred to in sub-section (6) of of Section 209, having been charged by the [9][managing director, manager,] or Board directors, as the case may be, with the duty of seeing that the provisions of this Section are complied with, makes default in doing so, he shall, in respect of each offence, be punishable with imprisonment for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both :

Provided that no person shall be sentenced to imprisonment for any such offence unless it was committed wilfully.

A specimen of statement prepared pursuant to the above Sec. 212 is given below :

D | C | M Annual Report 1973-74

Statement Pursuant to Section 212 of the Companies Act, 1956

(a) The Company held 1,000 Equity Shares of Rs. 100 each fully paid being 100% of the Equity Capital of DCM International Ltd, Subsidiary Company as at the close of the latter's financial year ending 30th June, 1974.

(b) (i) The Subsidiary Company incurred a loss of Rs 11,918 (1972-73 – profit of Rs. 2,08,076) for the financial year ending 30th June 1974, which has not been dealt with in the Holding Company's books.

(ii) The net aggregate amount of profit carried forward in the books of the Subsidiary Company amounts to Rs. 1,54,196 (1972-73 , Rs 1,91,114) and the Holding Company's share at 100% comes to Rs. 1,54,196 (1972-73 : Rs. 1,91,114) This profit has not been dealt with in accounts of the Holding Company.

(c) As the financial year of the Subsidiary Company coincides with the financial year of the Holding Company, Section 212 (5) of the Act is not applicable.

Consolidated Balance Sheet

In India holding company is not required to make a consolidated balance sheet or a consolidated profit and loss account. It is only for the sake of convenience that these statements are prepared. This chapter deals with the preparation of consolidated balance sheet only. The whole chapter is divided into following six broad parts :

(*a*) Fundamental principles of simple consolidation,

(*b*) Changes in parent company's equity,

(*c*) Reciprocal holdings,

(*d*) Calculation of derived profit when there is a subsidiary company,

(*e*) General illustrations and

(*f*) Accounting for investment in Associated Companies.

All these points have been dealt with at length in the following pages.

FUNDAMENTAL PRINCIPLES OF CONSOLIDATION

1—PHILOSOPHY OF CONSOLIDATION—ELIMINATION OF INVESTMENT ACCOUNT

Before proceeding to discuss the principles of consolidation, it is essential to understand the need for consolidating the balance sheets of the holding company and its subsidiaries. Directors of a company being the agents and trustees of the shareholders have a duty to disclose as to the manner in which the funds of the company are spent. They do this by presenting accounts and reports to their shareholders periodically. Therefore when shareholders' funds are invested to acquire a controlling interest in another company, it is natural for the directors to disclose the position of the other company (called subsidiary). The shareholders of the holding company are vitally interested in the affairs of the holding company and the subsidiary and it is for their perusal that the final accounts of both the companies are presented at the Annual General Meeting of the holding company. Under the Companies Act, 1956, there is no need to consolidate the balance sheet of the subsidiary with the holding company. But many shareholders being laymen may not be able to make out their interest from separate balance sheets. Therefore, in order to enable them to understand their interest better, it is preferable to give the consolidated balance sheet of the group. Regarding the balance sheets, consolidation is done by eliminating the investment account in the holding company and showing in its place the assets and liabilities of its subsidiary. This is the central idea behind the preparation of consolidated balance sheet and is illustrated below.

Illustration 1.

BALANCE SHEET
as on 31st March 1977

	H Rs.	*S* Rs		*H* Rs.	*S* Rs.
Share capital in Re. 1 shares	12,000	5,000	Sundry Assets	15,000	8,000
Sundry liabilities	8,000	3,000	Investment : 5,000 shares in S Ltd.	5,000	...
	20,000	8,000		20,000	8,000

Solution :

Instead of presenting two separate balance sheets to the shareholders of the holding company, a consolidated balance sheet can be presented by eliminating the investment account and showing in its place the assets and liabilities of the subsidiary. The Consolidated balance sheet will appear as under :

CONSOLIDATED BALANCE SHEET
as on 31st March 1977

	Rs.		Rs.
Share capital of *H* Company	12,000	Sundry Assets *H* 15,000 *S* 8,000	23,000
Sundry liabilities *H* 8,000 *S* 3,000	11,000		
	23,000		23,000

From the above the following rule may be formulated

RULE 1

> *While preparing a consolidated balance sheet investment of the holding company in the equity shares of the subsidiary is replaced by the assets and liabilities of the subsidiary.*

2—MINORITY INTEREST

In the above illustration we have considered the example of a fully owned subsidiary, *i.e.*, a subsidiary, where all the equity shares are held by the holding company. But in several practical cases the holding company is only a majority shareholder. Shares in the subsidiary are also held by others (outsiders). When the holding company shows all the assets and liabilities of the subsidiary in the consolidated balance sheet, the share of the outsiders in the net assets of the company must be shown as a liability. This is done on the liabilities side under the heading "minority interest".

The manner of consolidation with minority interest is illustrated below :

Illustration 2

BALANCE SHEETS
as on 31st March 1977

	H Rs.	*S* Rs.		*H* Rs.	*S* Rs.
Share capital in Re. 1 shares	12,000	5,000	Sundry assets	16,000	8,000
Sundry liabilities	8,000	3,000	Investment 4,000 shares in S Ltd.	4,000	..
	20,000	8,000		20,000	8,000

Solution :

In the above example, H Company holds only 4/5th of the shares, the other 1/5th being held by outsiders. So the outside shareholders have 1/5th share in the net assets which must be shown by H Company on the

liabilities side under the heading minority interest. The resulting consolidated balance sheet will appear as under.

CONSOLIDATED BALANCE SHEET

as on 31st March 1977

	Rs.		Rs.
Share capital of H Co :	12,000	Sundry Assets H 16,000 S 8,000	24,000
Minority interest (1)	1,000		
Sundry Liabilities H 8,000 S 3,000	11,000		
	24,000		24,000

Tutorial Notes :

(1) *Minority interest* :

1/5th share in the assets of S Co	1,600
Less 1/5th share in the liabilities	600
NET	1,000

Alternatively, minority interest may be taken as the sum of their share in the share capital, reserves and profit and loss account balances. If the company has accumulated losses, such losses must be deducted from the share capital held by them. In this illustration as there are no accumulated profits or losses, the minority share of net assets is exactly equal to the share capital held by them, *viz.*, Rs. 1,000.

RULE-2

> *In order to prepare a consolidated balance sheet investment of the holding company is replaced by the assets and liabilities of the subsidiary company in full and the share of outsiders in the net assets is shown on the liabilities side under the heading minority interest This share is also equal to the equity held by the outsiders. The following formula may be remembered with profit.*
>
> *Minority interest=Equity held by outsiders.*

3—COST OF CONTROL OR CAPITAL RESERVE

The two illustrations given above are over-simplified for the following reasons :

1. The net assets of the subsidary are exactly equal to its share capital. In other words, the subsidiary has accumulated neither losses nor profits.

2. The holding company acquires the investments exactly at par.

But in real world, the subsidiary may be having accumulated losses

likewise any loss is debited to Cost of Control or Goowill. The profit

Illustration 3.

BALANCE SHEET
as on 31st March 1977

	H	S		H	S
Share capital :	Rs.	Rs.		Rs.	Rs.
in Re.1 fully paid shares	12,000	6,000	Sundry assets	20,000	12,000
Reserve	3,000	2,000	Investment : 6,000 shares in S Ltd	7,500	—
Profit and loss A/c	2,000	1,000			
Sundry liabilities	10,500	3,000			
	27,500	12,000		27,500	12,000

H Ltd. has acquired shares on 31st March, 1977

Solution :

Calculation of capital reserve :

Method I :

Net assets acquired in S Ltd.	Rs
Gross Assets-Liabilities	9,000
Less Price paid for investment	7,500
Resultant capital reserve	Rs. 1,500

Method II :

Equity acquired in the subsidiary :

		Rs.
Share capital	6,000	
Reserve	2,000	
Profit and loss A/c	1,000	
Total		9,000
Less Price paid for investment		7,500
		1,500

CONSOLIDATED BALANCE SHEET
as on 31st March 1977

		Rs.			Rs.
Share capital in Re. 1 fully paid shares		12,000	Sundry assets	H 20,000	
Capital reserve		1,500		S 12,000	32,000
Reserve (H Ltd.)		3,000			
Profit & loss A/c (H Ltd.)		2,000			
Sundry liabilities :	H 10,500				
	S 3,000	13,500			
		32,000			32,000

Tutorial Notes : The Reserve and Profit and loss A/c balances of the subsidiary do not figure in the consolidated balance sheet as they are considered together with share capital in the calculation of capital reserve.

The student may note that it is not possible to consolidate the two balance sheets without first ascertaining the capital reserve. So is the, case when goodwill is involved. An illustration involving goodwill is given below.

Illustration 4.

BALANCE SHEETS
as on 31st March 1977

	H Rs.	S Rs.		H Rs.	S Rs.
Share capital in Re. 1 fully paid shares	15,000	6,000	Sundry assets	20,000	12,000
Reserve	3,000	2,000	Investment :		
Profit & Loss A/c	2,000	1,000	6,000 shares in		
Sundry liabilities	10,000	3,000	S Ltd.	10,000	—
	30,000	12,000		30,000	12,000

H Ltd. acquired the shares on 31st March 1977.

Solution :

A discerning student would notice that although there is no change in the balance sheet of the subsidiary from the one given in Illustration 3, H Ltd has paid a higher price for the investment in this case. The equity or the net assets remaining the same at Rs. 9,000, H Ltd has acquired the investment at Rs. 10,000 paying Rs. 1,000 for cost of control or goodwill. This may be neatly shown as given below :

Price paid for the investment	Rs.	10,000
Less Equity acquired in the subsidiary		9,000
Resultant goodwill		1,000

CONSOLIDATED BALANCE SHEET
as on 31st March 1977

		Rs.			Rs.
Share capital in Re. 1 fully paid shares		15,000	Sundry Assests :	*H* 20,000	
Reserve (H Ltd.)		3,000		*S* 12,000	32,000
Profit & Loss A/c		2,000	Goodwill or cost of control		1,000
Sundry liabilities	*H* 10,000				
	S 3,000	13,000			
		33,000			33,000

RULE-3

> *As a preliminary to the preparation of consolidated balance sheet, Goodwill or capital reserve resulting from out of acquisition of shares in the subsidiary must be ascertained. Goodwill or Cost of Control may be stated as the excess price paid for the Investment over and above the share in equity or the net assets acquired by the Holding Company. Conversely Capital Reserve is the excess of the share in equity or net assets of the subsidiary over and above the price paid for the investment.*

4—DISTINTION BETWEEN CAPITAL PROFITS AND REVENUE PROFITS

[illegible]
L [illegible]
c. [illegible]
ti [illegible]
subsidiary. However, in practice, the date of acquisition and the date of consolidation may not be one and the same

In such a case the holding company's share in profits and reserves must be divided into capital profits and revenue profits and only the former will be taken into account for calculating the Goodwill or Capital Reserve as the case may be In order to divide the profits and reserves into capital and revenue, the date of acquisition of the shares in the subsidiary is the deciding factor. Any profit or reserve standing in the balance sheet on the date of purchase of shares is called capital profits. Only those profits must be taken into account for considering the question of Capital Reserve or Goodwill

Profits earned and reserves built up subsequent to the date of purchase are treated as revenue profits and revenue reserves and are shown as such in the consolidated balance sheet. An illustration involving the allocation of Reserves and Profits into Capital and revenue is given below :

Illustration 5

BALANCE SHEET
as on 31st March 1977

	H Rs	*S* Rs.		*H* Rs.	*S* Rs.
Share Capital in Re. 1 fully paid shares	12,000	5,000	Sundry assets	20,000	8,000
Reserve	5,000	1,000	Investment A/c		
P & L A/c	2,000	1,000	5,000 Shares of *S* Ltd.	6,500	—
Sundry liabilities	7,500	1,000			
	26,500	8,000		26,500	8,000

Shares were acquired by *H* Ltd. on 30th September 1976.
S Ltd. transferred Rs. 500 from profits to reserve on 31st March 77.
Prepare the consolidated balance sheet.

HCA–12

Solution :

(A) **Tutorial Notes**

(1) *Revenue profits of the subsidiary :*

P & L A/c balance as on 31-3-77
Add Transfer made to reserve

Total profits earned for the year
Less Profits of the first 6 months (from 1-4-76 to 30-9-76) being profits prior to date of purchase

Revenue profits

(2) *Capital profit, i.e., profits earned prior to date of purchase :*

Reserve balance
Less Transferred from current profits

Reserve as on 1st April 1976.

(3) **Cost of Control or Capital Reserve :**

Equity acquired in the subsidiary :

		Rs.
Share capital		5,000
Pre-acquisition profits :		
Reserve as on 1-4-76.	500	
Profits made prior to purchase	750	1,250
Total		6,250

Price paid for the investment
Less Equity acquired in the subsidiary

Resultant goodwill

(B) CONSOLIDATED BALANCE SHEET
as on 31st March 1977

		Rs.			
Share capital in Re. 1 fully paid shares		12,000	Goodwill		
Reserve *H* Ltd		5,000	Sundry assets :		
			H	20,000	
			S	8,000	
P. & L. A/c					
H	2,000				
S	750	2,750			
Sundry liabilities					
H	7,500				
S	1,000	8,500			
		28,250			

RULE 4

> *While constructing a consolidated balance sheet at a date after acquisition, there is a need to divide all the profits into pre-acquisition profits and post-aquisition profits While post-acquisition profits are shown in the consolidated balance sheet, pre-acquisition profits are eliminated by taking them into account in the computation of cost of control or capital reserve.*

Pre-acquisition Losses

Sometimes at the time of acquisition, the subsidiary company may be having debit balance of profit and loss account. Holding Company's *share of such loss is to be taken as capital loss and is debited to cost of* control or goodwill account. This goodwill increases further if higher price is paid for investment or decreases or even may result in capital reserve, if lower price is paid for the investment.

Holding company's share of losses in the subsidiary, incurred after [illegible]

Illustration 6.

BALANCE SHEETS
as on 31st December 1977

	H Rs	*S* Rs		*H* Rs.	*S* Rs
Share capital in Re. 1 fully paid shares	10,000	5,000	Sundry assets	16,000	10,000
General reserve	5,000	—	5,000 shares in S Ltd.	6,000	—
Creditors	3,000	3,200			
Profit and loss A/c	4,000	1,800			
	22,000	10,000		22,000	10,000

Shares were purchased by *H* Ltd. in *S* Ltd on 30th June 1977. On 1st January 1977 the balance sheet of *S* Ltd showed loss of Rs. 3,000 which was written off out of the profits earned during 1977. Profits are assumed to accrue evenly throughout the year. Prepare consolidated balance sheet.

Solution:

(A) Tutorial Notes

(1) *Calculation of H Ltd.'s share of post-acquisition profits* :

	Rs.
Profit of *S* Ltd as per balance sheet	1,800
Add Loss written off	3,000
Profits made during the year	4,800
Profits from 30th June to 31st December	2 400

2) *Calculation of goodwill* :

	Rs.
Pre-acquisition loss :	
Profits earned to June 1977 (*i.e.*, 1/2 of Rs. 4,800)	2,400
Less Loss on 1st January 1977	3,000
Net loss as on 30th June 1977	600

3) *Equity acquired in S Ltd* :

Share capital	5,000	
Less Loss on the date of acquisition	600	4,400
Price paid for the investment		6,000
Resultant goodwill		1,600

Alternatively :

	Rs.
Price paid for the investment	6,000
Share capital held	5,000
Goodwill	1,000
Add Pre-acquisition loss	600
Total goodwill	1,600

(B) CONSOLIDATED BALANCE SHEET
as on 31st December 1977

		Rs.			Rs.
Share capital in Re. 1 fully paid shares		10,000	Goodwill		1,600
General reserve (*H*)		5,000	Sundry assets :		
Creditors :			*H*	16,000	
H	3,000		*S*	10,000	26,000
S	3,200	6,200			
Profit & loss A/c					
H	4,000				
S	2,400	6,400			
		27,600			27,600

RULE 5

> *If there are any losses in the subsidiary on the date of acquisition, these must be taken into account in the calculation of the equity held in the subsidiary. This is done by deducting such losses from the par value of shares held and the effect of it is to increase the goodwill or decrease the capital reserve, as the case may be.*

In all the above illustrations only one aspect was taken into account for the purpose of consolidation, so that the principles of consolidation may be clear to the students. But in practice in a problem more than one aspect may [illegible] dation. For exan [illegible] of goodwill may b [illegible]

Illustration 7.

From the balance sheets given below prepare a consolidated balance sheet of X Co Ltd and its subsidiary Y Co Ltd. The interests of the minority shareholders of Y Co., Ltd. are to be shown in the consolidated balance sheet.

BALANCE SHEET OF *X* Co LTD AND *Y* Co LTD
as on 31-12-1973

	Rs. *X*	Rs *Y*		Rs. *X*	Rs. *Y*
Share capital :			Land and buildings	1,52,00,000	
200,000 shares of Rs 80 each	1,60,00,000		Plant and machinery	22,40,000	3,20,000
20,000 shares of Rs. 80 each		16,00,000	Shares in *Y* Co. Ltd. 18,000 shares of Rs 80 each	28 80,000	—
General reserve	80,00,000		Stock	48,00,000	8,00,000
Creditors	48,00,000	3,20,000	Debtors	32,00,000	11,20,000
Profit and loss appropriation A/c	16,00,000	24,00,000	Cash at bank	20,80,000	20,80,000
	3,04,00,000	43,20,000		3,04,00,000	43,20,000

(B. Com. Madras April 1975)

Solution :

TUTORIAL NOTES

(i) *Minority interest :*

	Rs.
2,000 shares of Rs. 80 each	1,60,000
Profit and loss appropriation A/c (1/10)	2,40,000
Total	4,00,000

(2) *Capital reserve* :

	Rs.
Share capital :	
18,000 share of Rs. 80 each	14,40,000
Profit and loss appropriation A/c (9/10)	21,60,000
Total equity held	36,00,000
Less Price paid for the investment	28,80,000
	7,20,000

(B) CONSOLIDATED BALANCE SHEET OF *X* Co Ltd & *Y* Co Ltd
as on 31-12-73

		Rs.			Rs.
Share capital :			Land & buildings		1,52,00,000
2,00,000 shares of Rs. 80 each		1,60,00,000	Plant & machinery		
General reserve (*X*)		80,00,000	*X*	22,40,000	
Capital reserve		7,20,000	*Y*	3,20,000	25,60,000
Profit and loss appropriation A/c (*X*)		16,00,000	Stocks :		
Creditors :			*X*	48,00,000	
X	48,00,000		*Y*	8,00,000	56,00,000
Y	3,20,000	51,20,000	Debtors :		
Minority interest		4,00,000	*X*	32,00,000	
			Y	11,20,000	43,20,000
			Cash at bank :		
			X	20,80,000	
			Y	20,80,000	41,60,000
		3,18,40,000			3,18,40,000

Illustration 8.

From the balance sheets given below prepare a consolidated balance sheet of Moti Ltd., and its subsidiary company Choti Ltd. The interest of the minority shareholders is to be shown as a separate item. Shares were acquired on 1st Jan. 1977.

BALANCE SHEET OF MOTI LTD
as on 30th June, 1977

	Rs.		Rs.
Share capital :		Fixed assets :	
15,000 shares of Rs. 10 each	1,50,000	Land & building	1,20,000
General reserve	20,000	Plant & machinery	20,000
Profit and loss A/c	30,000	Current assets	58,000
Creditors	25,000	Investment :	
		2,000 shares of Rs. 10 each in Choti Ltd.	27,000
Rs.	2,25,000	Rs.	2,25,000

BALANCE SHEET OF CHOTI LTD
as on 30th June 1977

		Rs.		Rs.
Share capital :			Fixed assets :	
3,000 Shares of Rs. 10 each		30,000	Buildings	20,000
Profit and loss A/c :			Plant,	20,000
Balance on 1st July 1976	4,500		Current assets	10,000
Add Net profit for the year	6,000			
		10,500		
Sundry creditors		9,500		
		50,000		50,000

Solution :

(Adapted from C.A. Final)

(A) Tutorial Notes :

The student should note that while the date of acquisition is 1st Jan. 1977, consolidation is being effected on 30th June 1977. So there is a need to divide the profits into pre-acquisition and post-acquisition

(1) Pre-acquisition profits :

		Rs.
Balance as on 1st July 1976		4,500
Add Profits from 1st July 1976 to 31st Dec. 1976		3,000
	Total	7,500

(2) Post-acquisition profits

	Rs.
The profits for the year ending 30th June 1977	6,000
Less Pre-acquisition profits from 1st July 1976 to 31st Dec.	3,000
	3,000

(3) *Minority interest* :

		Rs.
(*a*) Share capital held : 1,000 shares of Rs 10 each		10,000
(*b*) One-third of all the undistributed profits as on 30th June 1977		3,500
	Minority interest	13,500

Note Rs. 3,500 of undistributed profit is made up of

(*i*) *One-third of the pre-acquisition profit of Rs. 7,500*	2,500
(*ii*) *One-third of the post-aquisition profits of Rs. 3,000*	1,000
	3,500

Note It may be noted that there is no need to divide the profits into pre- and post-acquisition (Capital and Revenue) for calculating minority interest.

(4) *Goodwill* :

			Rs.
Price paid for the investment			27,000
Less Equity held in Choti Ltd.			
Share capital	20,000		
2/3rds of pre-acquisition profit	5,000		25,000
		Resultant goodwill	2,000

(5) *Holding company's share of revenue profits :*
2/3rds of Rs. 3,000 — Rs. 2,000

(B) CONSOLIDATED BALANCE SHEET OF MOTI Ltd AND CHOTI Ltd
as on 30th June 1977

Share capital :			Goodwill			Rs. 2,000
15,000 shares of Rs. 10 each		Rs. 1,50,000	Land and buildings :			
General reserve		20,000	Moti Ltd		1,20,000	
Profit and loss A/c :			Choti Ltd		20,000	1,40,000
Moti Ltd	30,000		Plant and machinery :			
Choti Ltd	2,000	32,000	Moti Ltd		20,000	
Minority interest :		13,500	Choti Ltd		20,000	40,000
Creditors :			Current assets :			
Moti Ltd	25,000		Moti Ltd		58,000	
Choti Ltd	9,500	34,500	Choti Ltd		10,000	68,000
		2,50,000				2,50,000

Illustration 9.

Consolidate the following balance sheets as on 31st March, 1977 :

	H Rs.	S Rs.		H Rs.	S Rs.
Capital Re. 1 shares	1,600	2,000	1,800 Shares in S	1,600	—
Creditors	—	800	Sundry assets	—	2,400
			Profit and loss A/c	—	400
	1,600	2,800		1,600	2,800

At the date of acquisition, *S* had a debit balance of profit and loss account of Rs. 3 00

Solution :

(A) Tutorial Notes

		Rs.
(1) *Goodwill* :	Price paid for the purchase	1,600
	Less Paid-up value	1,800
	Capital reserve	200
	Less Pre-acquisition loss, *i.e.*, $\frac{18}{20}\times$ Rs. 300	270
	Goodwill	70

(2) *Holding company's share out of revenue loss* :

Post-acquisition loss		100
Holding company's share, thereof, *i.e.*, $\frac{18}{20}\times$ Rs. 100		90
Minority interest :	Outstanding Shares	200
	Less Share of loss, *i.e.*, 1/10 × Rs. 400	40
		160

Note. If there were profits, proportionate amount would have been added to it.

(B) CONSOLIDATED BALANCE SHEET
as on 31st March 1977

	Rs.		Rs.
Share capital	1,600	Goodwill	70
Creditors in *S*	800	Assets in *S*	2,400
Minority interest	160	Share of loss in *S*	90
	2,560		2,560

5—ELIMINATION OF COMMON TRANSACTIONS

It is not uncommon to find some transactions which appear in both the balance sheets. *Following instances may be quoted safely :*

(*a*) Loan advanced by the holding company to the subsidiary and *vice versa*. This appears as an asset in the balance sheet of the company which gives loan and as a liability in the balance sheet of that company which takes the loan

(*b*) Bill of exchange given by one company to another appears as bills payable in the balance sheet of the accepting company and as bills receivable in the balance sheet of the drawer company

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The above transactions, and other transactions of similar nature at the time of consolidation will, unless eliminated, appear on both the sides of the balance sheet. It is, therefore, advisable that such transactions may not be shown on any side of the balance sheet.

Illustration 10.

The following are the summarised balance sheets of *A* Ltd and its subsidiary *B* Ltd, as on 31-12-1965 :

	A Ltd Rs.	*B Ltd* Rs.		*A Ltd* Rs.	*B Ltd* Rs.
5,000 Ordinary shares of Rs. 100 each fully paid	5,00,000		Land and buildings	1,00,000	40,000
			Plant and machinery	1,00,000	50,000
			Stock in trade	90,000	30,000
			Sundry debtors	40,000	30,000
10,000 Ordinary shares of Rs. 10 each		1,00,000	Bills receivable	5,000	...
			Bank	1,10,000	20,000
			Cash in hand	5,000	5,000
General reserve	10,000	40,000	*Investments*		
Sundry creditors	20,000	30,000	7,500 Shares of B Ltd at cost	80,000	..
Bills payable	—	5,000			
	5,30,000	1,75,000		5,30,000	1,75,000

A Ltd acquired shares in *B* Ltd on 1-1-1965 when *B* Ltd had 10,000 in general reserve. No dividend has been declared by *B* Ltd in 1965.

All bills receivable of *A* Ltd are drawn on *B* Ltd.

You are asked to prepare a consolidated balance sheet of *A* Ltd. and its subsidiary *B* Ltd, as on 31-12-1965.

(B. Com. Madras, Sept., 1976)

(5) *Holding company's share of revenue profits :*
2/3rds of Rs. 3,000 Rs. 2,000

(B) CONSOLIDATED BALANCE SHEET OF MOTI Ltd AND CHOTI Ltd
as on 30th June 1977

Share capital :			Goodwill		Rs. 2,000
15,000 shares of Rs. 10 each		Rs. 1,50,000	Land and buildings :		
General reserve		20,000	Moti Ltd	1,20,000	
Profit and loss A/c :			Choti Ltd	20,000	1,40,000
Moti Ltd	30,000		Plant and machinery :		
Choti Ltd	2,000	32,000	Moti Ltd	20,000	
Minority interest :		13,500	Choti Ltd	20,000	40,000
Creditors :			Current assets :		
Moti Ltd	25,000		Moti Ltd	58,000	
Choti Ltd	9,500	34,500	Choti Ltd	10,000	68,000
		2,50,000			2,50,000

Illustration 9.

Consolidate the following balance sheets as on 31st March, 1977 :

	H Rs.	S Rs.		H Rs.	S Rs.
Capital Re. 1 shares	1,600	2,000	1,800 Shares in S	1,600	—
Creditors	—	800	Sundry assets	—	2,400
			Profit and loss A/c	—	400
	1,600	2,800		1,600	2,800

At the date of acquisition, *S* had a debit balance of profit and loss account of Rs. 3 00

Solution :

(A) Tutorial Notes

		Rs.
(1) *Goodwill* :	Price paid for the purchase	1,600
	Less Paid-up value	1,800
	Capital reserve	200
	Less Pre-acquisition loss, *i.e.*, $\frac{18}{20}\times$ Rs. 300	270
	Goodwill	70

(2) *Holding company's share out of revenue loss* :

Post-acquisition loss		100
Holding company's share, thereof, *i.e.*, $\frac{18}{20}\times$ Rs. 100		90
Minority interest :	Outstanding Shares	200
	Less Share of loss, *i.e.*, 1/10 × Rs. 400	40
		160

Note. If there were profits, proportionate amount would have been added to it.

(B) CONSOLIDATED BALANCE SHEET
as on 31st March 1977

	Rs.		Rs.
Share capital	1,600	Goodwill	70
Creditors in S	800	Assets in S	2,400
Minority interest	160	Share of loss in S	90
	2,560		2,560

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	A Ltd Rs.	*B Ltd* Rs.		*A Ltd* Rs.	*B Ltd* Rs.
5,000 Ordinary shares of Rs 100 each fully paid	5,00,000		Land and buildings	1,00,000	40,000
10,000 Ordinary shares of Rs. 10 each		1,00,000	Plant and machinery	1,00,000	50,000
General reserve	10,000	40,000	Stock in trade	90,000	30,000
Sundry creditors	20,000	30,000	Sundry debtors	40,000	30,000
Bills payable	—	5,000	Bills receivable	5,000	...
			Bank	1,10,000	20,000
			Cash in hand	5,000	5,000
			Investments 7,500 Shares of B Ltd at cost	80,000	...
	5,30,000	1,75,000		5,30,000	1,75,000

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(B. Com. Madras, Sept., 1976)

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2/3rds of Rs. 3,000 — Rs. 2,000

(B) CONSOLIDATED BALANCE SHEET OF MOTI Ltd AND CHOTI Ltd
as on 30th June 1977

Share capital :			Goodwill			Rs. 2,000
15,000 shares of Rs. 10 each		Rs. 1,50,000	Land and buildings :			
General reserve		20,000	Moti Ltd		1,20,000	
Profit and loss A/c :			Choti Ltd		20,000	1,40,000
Moti Ltd	30,000		Plant and machinery :			
Choti Ltd	2,000	32,000	Moti Ltd		20,000	
Minority interest :		13,500	Choti Ltd		20,000	40,000
Creditors :			Current assets :			
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Creditors	—	800	Sundry assets	—	2,400
			Profit and loss A/c	—	400
	1,600	2,800		1,600	2,800

At the date of acquisition, *S* had a debit balance of profit and loss account of Rs. 3 00

Solution :

(A) Tutorial Notes

		Rs.
(1) *Goodwill* :	Price paid for the purchase	1,600
	Less Paid-up value	1,800
	Capital reserve	200
	Less Pre-acquisition loss, *i.e.*, $\frac{18}{20}\times$ Rs. 300	270
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as on 31st March 1977

	Rs.		Rs.
Share capital	1,600	Goodwill	70
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			Plant and machinery	1,00,000	50,000
			Stock in trade	90,000	30,000
			Sundry debtors	40,000	30,000
10,000 Ordinary shares of Rs. 10 each		1,00,000	Bills receivable	5,000	..
			Bank	1,10,000	20,000
			Cash in hand	5,000	5,000
General reserve	10,000	40,000	*Investments*		
Sundry creditors	20,000	30,000	7,500 Shares of B Ltd at cost		
Bills payable	—	5,000		80,000	...
	5,30,000	1,75,000		5,30,000	1,75,000

A Ltd acquired shares in *B* Ltd on 1-1-1965 when *B* Ltd had 10,000 in general reserve. No dividend has been declared by *B* Ltd in 1965.

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(B. Com. Madras, Sept., 1976)

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2/3rds of Rs. 3,000 Rs. 2,000

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as on 30th June 1977

Share capital :			Goodwill		Rs. 2,000
15,000 shares of Rs. 10 each		Rs. 1,50,000	Land and buildings :		
General reserve		20,000	Moti Ltd	1,20,000	
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Creditors	—	800	Sundry assets	—	2,400
			Profit and loss A/c	—	400
	1,600	2,800		1,600	2,800

At the date of acquisition, *S* had a debit balance of profit and loss account of Rs. 3 00

Solution :

(A) Tutorial Notes

		Rs.
(1) *Goodwill* :	Price paid for the purchase	1,600
	Less Paid-up value	1,800
	Capital reserve	200
	Less Pre-acquisition loss, *i.e.*, $\frac{18}{20} \times$ Rs. 300	270
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Post-acquisition loss		100
Holding company's share, thereof, *i.e.*, $\frac{18}{20} \times$ Rs. 100		90
Minority interest :	Outstanding Shares	200
	Less Share of loss, *i.e.*, 1/10 × Rs. 400	40
		160

Note. If there were profits, proportionate amount would have been added to it.

(B) CONSOLIDATED BALANCE SHEET
as on 31st March 1971

	Rs		Rs.
Share capital	1,600	Goodwill	70
Creditors in S	800	Assets in S	2,400
Minority interest	160	Share of loss in S	90
	2,560		2,560

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	A Ltd Rs.	*B Ltd* Rs.		*A Ltd* Rs.	*B Ltd* Rs.
5,000 Ordinary shares of Rs. 100 each fully paid	5,00,000		Land and buildings	1,00,000	40,000
			Plant and machinery	1,00,000	50,000
			Stock in trade	90,000	30,000
			Sundry debtors	40,000	30,000
10,000 Ordinary shares of Rs. 10 each		1,00,000	Bills receivable	5,000	..
			Bank	1,10,000	20,000
General reserve	10,000	40,000	Cash in hand	5,000	5,000
Sundry creditors	20,000	30,000	*Investments* · 7,500 Shares of B Ltd at cost	80,000	..
Bills payable	—	5,000			
	5,30,000	1,75,000		5,30,000	1,75,000

A Ltd acquired shares in B Ltd on 1-1-1965 when B Ltd had 10,000 in general reserve. No dividend has been declared by B Ltd in 1965.

All bills receivable of A Ltd are drawn on B Ltd.

You are asked to prepare a consolidated balance sheet of A Ltd, and its subsidiary B Ltd, as on 31-12-1965.

(B. Com. Madras, Sept., 1976)

Solution :

(A) **Tutorial Notes**

1. *Statement of goodwill or capital reserve :*

		Rs.
Cost of Shares in *B* Ltd.		80,000
Equity held in *B* Ltd.		
Share capital	75,000	
Share in general reserve (3/4)	7,500	82,500
Resultant capital reserve		2,500

2. *Statement of general reserve :*

		Rs.
Balance as per balance sheet of *A* Ltd		10,000
Balance as per balance sheet of *B* Ltd	40,000	
Less Reserve as on 1-1-65	10,000	
	30,000	
3/4ths of Rs. 30,000		22,500
Total for consolidated balance sheet		32,500

3. *Minority Interest :*

	Rs.
Share capital held by outsiders	25,000
1/4th share in general reserve	10,000
	35,000

(B) CONSOLIDATED BALANCE SHEET OF *A* Ltd AND *B* Ltd
as on 31st December, 1965

		Rs.			Rs.
5,000 Ordinary shares of Rs. 100 each		5,00,000	Land & buildings :	Rs.	
General reserve :			*A* Ltd	1,00,000	
A Ltd	10,000		*B* Ltd	40,000	1,40,000
B Ltd	22,500	32,500	Plant & machinery :		
Capital reserve		2,500	*A* Ltd	1,00,000	
Sundry creditors :			*B* Ltd	50,000	1,50,000
A Ltd	20,000		Stock in trade :		
B Ltd	30,000	50,000	*A* Ltd	90,000	
Minority interest		35,000	*B* Ltd	30,000	1,20,000
			Sundry debtors :		
			A Ltd	40,000	
			B Ltd	30,000	70,000
			Bank balance :		
			A Ltd	1,10,000	
			B Ltd	20,000	1,30,000
			Cash balance :		
			A Ltd	5,000	
			B Ltd	5,000	10,000
		6,20,000			6,20,000

6—TREATMENT OF CONTINGENT LIABILITIES

Contingent liability is that occurrence of which is uncertain. Thus contingent liability may or may not involve payment of money. It is shown by appending explanatory notes at the foot of the balance sheet by both the companies separately. Examples of contingent liability are :

(a) liability for calls on partly paid-up shares
(b) liability in respect of bills discounted
(c) liability under guarantee
(d) arrears of dividend on cumulative preference shares

The treatment of contingent liability depends on the nature of con- [illegible] ansaction [illegible] nal con- [illegible] ding and [illegible] external [illegible] consoli- [illegible] from the note as they appear as actual liability in the consolidated balance sheet.

Illustration 11.

[illegible]

"There is a contingent liability on Bills discounted Rs 40,000."

Show how these items would appear in the consolidated balance sheet.

Solution :

As stated in the note under Illustration 10, it is not possible to eliminate all the bills accepted by the subsidiary, as some of the bills are discounted by the holding company. Of the Rs. 25,000 bills accepted by *S* Ltd Rs. 10,000 are discounted by *H* Ltd and therefore, only Rs. 15,000 are indicated as bills receivable from *S* Ltd. So only Rs. 15,000 are to be eliminated from bills payable and bills receivable for the purpose of consolidation.

[illegible] unted for Rs. 40,000, to [illegible] bills accepted by *S* Ltd., [illegible] Rs 10,000 representing [illegible] and Rs 30,000 being external contingent liability, must be retained.

CONSOLIDATED BALANCE SHEET
as on 31st December, 1978

	Rs.		Rs.
Bills payable (Rs. 30,000 – Rs. 15,000)	15,000	Bills receivable (Rs 70,000 – Rs. 15,000)	55,000

Note : There is a contingent liability in respect of bills discounted Rs. 30,000.

RULE 6

> *While showing the contingent liabilities at the foot of the balance sheet, liabilities arising due to transactions within the group must be eliminated and liabilities arising due to transactions between the group and the outsiders must be retained.*

Similar treatment should be given to guarantees provided by one company to another in the group.

7—TREATMENT OF UNREALISED PROFITS

The problem of unrealised profit arises only (*a*) when there is a sale of goods at profit by one company in the group to another company ; *and* (*b*) when goods so sold to that another company remain unsold and appear as an asset in the balance sheet of that company.

While making a consolidated balance sheet following procedure may be adopted :

(*i*) Calculate the profit at a rate given in the question on the unsold stock supplied by the other company in the group,

(*ii*) Deduct from the profit calculated above such part which belongs to minority interest,

(*iii*) The balance of profit (left after deducting minority interest) is to be deducted from the profit of the company selling the goods and from the stock of the company receiving goods.*

It may be noted that out of total unrealised profit minority interest must be deducted because so far as minority interest is concerned, there is no unrealised profit. For them even company from the group is like other third party.

Illustration 12.

The following are the summarised balance sheets of Imperial Co., Ltd. and Colonial Co. Ltd. as on 31st December, 1972 :

	Imperial Co Ltd Rs.	*Colonial Co Ltd* Rs.		*Imperial Co Ltd* Rs.	*Colonial Co Ltd* Rs.
Paid-up capital in shares of Rs. 10 each	10,00,000	3,00,000	Freehold premises	4,50,000	1,20,000
General reserve	4,00,000	1,25,000	Plant & machinery	3,50,000	1,60,000
Profit and loss A/c	3,00,000	1,75,000	Furniture	80,000	30,000
Sundry creditors	1,00,000	70,000	Debtors	3,00,000	1,70,000
			Stock	3,20,000	1,60,000
			Investment in 20,000 shares in Colonial Co Ltd at cost	2,60,000	...
			Cash balance	40,000	30,000
	18,00,000	6,70,000		18,00,000	6,70,000

*According to AICPA the full amount of profits should be eliminated as the consolidated balance sheet represents the financial position of a single business enterprise.

You are required to prepare a consolidated balance sheet as on 31-12-1972, showing in detail necessary adjustments and taking into consideration the following information :

(a) Imperial Co Ltd acquired the shares of Colonial Co Ltd on 1-1-1972 when the balances on their profit and loss account and general reserve were Rs. 75,000 and Rs. 80,000 respectively.

(b) Stock of Rs. 1,60,000 held by Colonial Co Ltd consists of Rs. 60,000 goods purchased from Imperial Co Ltd, who has charged profit at 25% on cost.

Solution : [B. Com. (Hons.) Calcutta 1971]

(A) Tutorial Notes

(1) *Statement regarding goodwill or capital reserve* :

			Rs.
Price paid for the investment			2,60,000
Equity :			
Nominal value of shares held		2,00,000	
Pre-acquisition profits :			
Profit and loss A/c	75,000		
General reserve	80,000		
Total	1,55,000		
2/3rds shares in the profits		1,03,333	3,03,333
Resultant capital Reserve			43,333

(2) *Minority interest* :

Share capital held	
10,000 shares of Rs. 10 each	1,00,000
General reserve (1/3)	41,667
Profit and loss A/c (1/3)	58,333
	2,00,000

(3) *General reserve* :

As per the balance sheet of Imperial Co. Ltd.		4,00,000
As per the balance sheet of Colonial Co Ltd	1,25,000	
Less : Reserve as on 1-1-72	80,000	
	45,000	
Less : 1/3 due to minority shareholders	15,000	30,000
		4,30,000

(4) *Unrealised profits* :

Imperial Co. Ltd. sells goods at 25% on cost. As the unsold stock of Rs. 60,000 is at selling price, the profit must be expressed as a percentage on selling price.

	Rs.
Let the cost price be	100
Profit at 25%	25
Selling price	125

Profit as a percentage of selling price $\frac{25 \times 100}{125} = 20\%$

∴ Unrealised profit = 20% of Rs. 60,000
= Rs. 12,000

Less Share of minority shareholders (1/3)	=	4,000
Group's share of unrealised profit		8,000

(5) *Profit and loss A/c balance*

		Rs.
Profit and loss A/c as per balance sheet of Imperial Co Ltd		3,00,000
Less : unrealised profit (See '*a*')		8,000
		2,92,000
Profit and loss A/c as per balance sheet of Colonial Co. Ltd.	1,75,000	
Less Pre-acquisition profit	75,000	
	1,00,000	
Less 1/3 belonging to minority shareholders	33,333	66,667
		3,58,667

(B) CONSOLIDATED BALANCE SHEET OF IMPERIAL CO Ltd AND COLONIAL CO Ltd
as on 31-12-1972

Capital		Rs.	*Fixed Assets*		Rs.
Paid-up capital in shares of Rs. 10 each		10,00,000	Freehold premises :		
Reserves and surplus			I. Co Ltd	4,50,000	
capital reserve (See '*a*')		43,333	C Co Ltd	1,20,000	5,70,000
General reserve :			Plant and machinery :		
I. Co Ltd	4,00,000		I. Co Ltd	3,50,000	
C. Co Ltd	30,000	4,30,000	C. Co Ltd	1,60.000	5,10,000
Profit and loss account :			Furniture :		
I. Co Ltd	2,92,000		I. Co Ltd	80,000	
C. Co Ltd	66,667	3,58,667	C. Co Ltd	30,000	1,10,000
Secured and unsecured loans		...	Current Assets :		
Current liabilities and provisions :			Stock in trade :		
I. Co Ltd	1,00,000		I Co Ltd	3.20.000	
C. Co Ltd	70,000	1,70,000	C. Co. Ltd	1,60,000	
			Less : Unrealised profit	8,000	4,72,000
				52,000	

Minority Interest (See 'b')	2,00,000			
		Sundry debtors :		
		I. Co Ltd	3,00,000	
		C. Co Ltd	1,70,000	4,70,000
		Cash :		
		I. Co Ltd	40,000	
		C. Co Ltd	30,000	70,000
	22,02,000			22,02,000

Illustration 13.

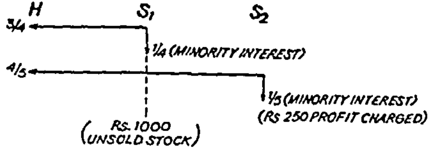
Following is the affiliation position of *H* Ltd, S_1 Ltd and S_2 Ltd. :

H Ltd holds 3/4ths holdings of S_1 Ltd
H Ltd holds 4/5ths holdings of S_2 Ltd

Stocks of S_1 Ltd. include unsold stock purchased from S_2 Ltd. for Rs 1,000. Show at what price these goods will appear in the consolidated balance sheet, if goods were sold by S_2 Ltd at $33\frac{1}{3}\%$ profit on cost.

Solution :

In order to calculate unrealised profit, the information is put in the form of a diagram as below :



(*i*) Now out of profit charged by S_2, 1/5th belongs to minority interest and hence to this extent there is no unrealised profit. Thus unrealised profit can be (Rs. $250 - \frac{1}{5} \times$ Rs. 250) = Rs. 200.

(*ii*) As per the above calculations holding company can show stock at Rs 800 (*i.e.* Rs. 1,000 − Rs. 200) and can reduce profits by Rs. 200. But this will mean that total stock of S_1 is reduced *to cost price. Since there are again minority interests in* S_1 (to the extent of 1/4th of the holding) they are not interested in calculating unrealised profit on that portion of stock which belongs to another type of minority interest. Thus, it will further be reduced by that portion. Thus calculation will be as under :

Rs. $200 - \frac{1}{4} \times$ Rs. 200 = Rs. 150 net unrealised profit

This can be done directly as below :

Rs. $250 \times \frac{4}{5} \times \frac{3}{4}$ = Rs. 150 (taking into consideration holding company's share into subsidiary companies)

Stock will appear at Rs. 850 in the consolidated balance sheet.

Illustration 14.

H Ltd holds 4/5ths of equity shares of *S* Ltd. Calculate unrealised profits if stock of *H* Ltd. includes Rs. 18,000 of goods purchased from *S* Ltd and that of *S* Ltd includes Rs. 20,000 supplied by *H* Ltd. Goods are sold at a profit of 20% on cost by the subsidiary to the holding company and at a profit 1/4th on sale by the holding company to the subsidiary company.

Solution :

The unrealised profit is calculated with the rate applicable to the seller of goods and is calculated on the stock left with the buyer. Thus unrealised profit is—

		Rs.
(*i*) *For goods supplied by the holding company*		
1/4 × Rs. 20,000	5,000	
Less : Minority holdings, *i.e.*, 1/5	1,000	4,000
(*ii*) *For good supplied by the subsidiary company*		
1/6[1] × Rs. 18,000	3,000	
Less : Minority holdings, *i.e.*, 1/5	600	2,400
Total unrealised profit		6,400

1. 20% on cost = 1/5th cost = 1/6th on sale.

8—REVALUATION OF ASSETS AND LIABILITIES

It is sometimes seen that at the time of acquisition of shares in the subsidiary company fixed assets of the subsidiary company are revalued. If such a revaluation of assets takes place, profit or loss on the revaluation of fixed assets is treated as a capital profit or loss. The profit is not available for dividend and must appear on the liability side of the balance sheet of the subsidiary company under the heading Capital Reserve or may be used for writing off goodwill. The loss on revaluation may, however, be met out of revenue profit. At the time of consolidation, the capital reserve is divided among shareholders, *i.e.*, minority interest and holding company. Holding company's share out of such capital profit is either put to capital reserve or deducted from goodwill or cost of control and *vice versa* in case of loss on revaluation. Minority shareholders' share is added to Minority Interest. Profits at the end of year will be charged with the depreciation on the revised values. However, sometimes this adjustment is done from the back date in case revaluation is not given effect to immediately. The adjustment will involve the correction of profits due to change in the amount of depreciation and also division of profit or loss on revaluation of fixed assets.

Illustration 15.

Following is the balance sheet of *H* and *S* :

BALANCE SHEET
as on 31st December, 1969

	H Rs	*S* Rs		*H* Rs.	*S* Rs.
Share capital	10,000	8,000	6,400 shares in *S* company	7,000	—
General reserve	4,000	2,000	Other assets	10,000	11,000
Profits (current)	3,000	1,000			
Rs.	17,000	11,000	Rs.	17,000	11,000

At the time of acquisition of shares by *H* company in *S* company, on 1st January, 1969 plant of Rs. 6,000 of *S* Ltd. was revalued at Rs. 8,000 and furniture of *S* Ltd of Rs 2,000 was revalued at Rs. 1,500. The balance sheet of *S* Ltd. showed the above assets on the non-revalued basis. You are required to prepare a consolidated balance sheet after giving effect to above revaluation from 1st January, 1969. Depreciation is charged on plant at 10% p a. and on furniture at 5% p a.

Solution :

(A) *TUTORIAL NOTES*

(1) *Capital profit on revaluation* :

Profit on plant	Rs. 2,000
Loss on furniture	500
Total net profit	1,500
Holding company's share thereof (deducted from cost of control)	1,200
Minority interest thereof (added to Minority Interest)	300

(2) *Adjustment of profit of S Ltd* :

Profit earned during the year	Rs. 1,000
Less Additional depreciation on plant at 10% p.a. on Rs. 2,000	200
	800
Add Excess depreciation charge on furniture of Rs. 500 at 5% p.a.	25
Corrected profit after revaluation	825
Holding company's share thereof	660
Minority interest thereof	165

(3) *Calculation of minority interest* :

Share capital outside the group	Rs. 1,600
Add Proportionate reserve	400
Proportionate profit	165
Proportionate profit on revaluation	300
	Rs. 2,465

(4) Capital Reserve | Cost of Control

	Rs.
Paid-up value of shares purchased	6,400
Add : General reserve in *S* Ltd.	1,600
Add : Capital profit on revaluation	1,200
Total equity acquired	9,200
Less : Cost of shares	7,000
	2,200

(5) *Plant has been calculated as follows* :

Plant on 1st Janury 1969	Rs. 6,00
Less Depreciation already charged	60
	5,40
Add Increase in value on revaluation (*i e.*, from Rs. 6,000 to Rs. 8,000)	2,00
	7,40
Less Depreciation on increased value	20
	Rs. 7,20

(6) *Furniture has been revalued as follows* :

Furniture on 1st January 1969	Rs. 2,00
Less Depreciation at 5%	10
	1,90
Less Fall in value on revaluation	50
	1,40
Add Depreciation charged in excess	2
	Rs. 1,425

(7) *Value of other assets is arrived at as follows* :

			Rs.
Total value of assets			11,00
Plant on 1st January	6,000		
Less Depreciation at 10%	600		
Value of 31st December		5,400	
Furniture on 1st January	2,000		
Less Depreciation at 5%	100		
Value on 31st December		1,900	

Total value of plant and furniture 7,300

Total value of other assets Rs. 3,700

Consolidated Balance Sheet
as on 31 December 1969

	Rs.			Rs.
Shares capital	10,000	Assets :		
General reserve	4,000	H company		10,000
Capital reserve	2,200	S company		
Minority Interest	2,465	Plant	7,200 (1)	
Profit : *H* Ltd. 3,000		Furniture	1,425 (2)	
S Ltd. 660		Other assets	3,700 (3)	
	3,660			12,325
	Rs. 22,325			Rs. 22,325

9—PREFERENCE SHARES IN SUBSIDIARIES

So far it has been assumed that the subsidiary company has issued only one type of shares, *i.e.*, equity shares. If the subsidiary company has issued preference shares also then the treatment of these shares in the consolidated balance sheet will be as follows .

When shares are held by holding company

If the holding company itself [illegible] the paid-up value will be deduc[illegible] company in the same way as in c[illegible] between the cost and paid-up value of shares held gives the cost of control and is added to that part of cost of control which is derived from the equity shares held in the subsidiary company. If the subsidiary company issues such shares, either at discount or at premium, it is not to be considered for calculating cost of control as any issue on such terms is automatically incorporated in the cost of preference shares. The fixed dividend on preference shares accrued to the date of acquisition will be [illegible] the pre-acquisition profits of [illegible] ares. Accrued dividend from [illegible] reparation of account, however, will be considered as revenue profits (if they are declared out of profits earned after the acquisition of shares) and shall be properly included among holding company's shares in the revenue profits of the subsidiary company.

When shares are held by outsiders

When preference shares are held by outside members, the minority interest will also include the paid up amount of shares held and the amount in respect of dividend (calculated at the fixed rate) accrued to the date of consolidation.

---

1. Preference shares are those shares which have the priority as to the repayment of capital and payment of dividend They are always cumulative unless otherwise mentioned They are also non-participating in the surplus as well as capital unless it is otherwise mentioned.

If profits of the subsidiary company have been insufficient to pay cumulative dividend on preference shares (because preference shares are always cumulative) then a proper provision is made from the existing reserves and is added to the minority interest. It may be carefully seen that if profits are not sufficient to meet all the arrears of dividend or if there is debit balance of profit and loss account, there is no necessity of providing the arrears of dividend out of consolidated profits. It may, however, be shown as a note under the balance sheet.

Treatment of losses in the subsidiary company

When the balance sheet of the subsidiary company shows a debit balance of profit and loss account, preference shareholders are not called upon to bear the proportionate loss and thus whole loss is divided among equity shareholders. This means that the loss of the subsidiary company is divided between minority interest and holding company in the ratio of their interest in the equity shares of the subsidiary company.

DOUBLE ENTRY FOR CONSOLIDATION

So far an attempt has been made to discuss the basic principles involved in consolidation. The technique of consolidation adopted till now was without employing double entry. A student can however also employ double entry method to complete consolidation and probably may find it easier than the technique adopted so far.

For the purpose of using double entry, the group comprising the holding company and its subsidiaries is taken as a single entity and all the adjustments are made as if we are dealing with only one set of books. One account each should be opened for the items *figuring* in the balance sheets of the holding company and the subsidiaries. In addition two new accounts will have to be opened and they are : (1) cost of control account, and (2) minority interest account. The journal entries are given separately (1) if consolidation is *done at the time* of acquisition and, (2) if consolidation is done some time after acquisition.

Consolidation at the time of aquisition

1. Transfer of investment account.
   Debit Cost of control A/c
   Credit investment A/c

2. Elimination of share capital of the subsidiary
   Debit Share capital A/c
   Credit Cost of control A/c (held by holding company)
   Credit Minority interest (held by outsiders)

The above entries will help to eliminate the investment account and share capital of the subsidiaries from consolidated balance sheet.

3. Transfer of reserves and profit and loss account balances.
   Debit General reserve
   Debit Profit and loss account
   Credit Cost of control A/c (share of the holding Company)
   Credit Minority interest (share of the outsiders)

There can be separate entries—one for general reserve and another for profit and loss account.

4. Transfer of balance in cost of control account.

At this stage the cost of control account will appear as follows :

COST OF CONTROL A/c

Investment A/c	Share capital
Capital reserve	General reserve
Transfer	Profit and loss account
	Goodwill account transfer

If the debit side is more, difference is transferred to goodwill account and if the credit side is more, the difference is transferred to capital reserve account

5. Elimination of inter-company transactions.

Inter-company transactions usually occur after acquisition, but it is not uncommon for one company to acquire the shares of another company with which it has trade and other dealings. So there can be inter-company transactions requiring elimination at the time of acquisition.

(i) When the moneys are due from one company to another on account of trade transactions :
Debit Sundry creditors (in the debtor company)
Credit Sundry debtors (in the creditor company)

(ii) When there are bills of exchange outstanding between one company and another :

(iii) [illegible]

(iv) [illegible]

(v) [illegible]
company)
Credit Debenture interest payable A/c (in the issuing company)

(vi) For the elimination of unrealised profit :
Debit Profit and loss A/c (in the selling company)
Credit stock A/c (in the buying company)

Thus consolidation entries are usually needed for the following :

(a) For writing off share capital of the subsidiary company and investments of the holding company in the subsidiary company.
(b) For incorporating minority interest.
(c) For transferring the pre-acquisition profits of the subsidiary to the minority interest and majority interest.
(d) For eliminating all common transactions, e.g., bills payable with bills receivable, advances with loans, etc.
(e) For making all adjustments, e.g., under/over valuation of assets, unrealised profits, excess and under-charging of depreciation, etc.

Illustration 16

The balance sheet of Poona Productions Ltd. Poona and Bombay Productions Limited, Bombay, as on 30th June, 1977 were as follows :

BALANCE SHEET
as on 30th June 1977

Liabilities	P.P. Ltd Rs.	B P Ltd Rs.	Assets	P.P. Ltd Rs.	B.P. Ltd Rs.
Share capital in Rs. 100 equity shares	3,00,000	2,50,000	Fixed assets :		
Reserves & surplus :			Goodwill	50,000	15,000
Revenue reserve	50,000	40,000	Investments :	2,05,000	10,000
Current liabilities :			Current assets :		
Sundry creditors	50,000	60,000	Stock in hand	90,000	2,80,000
Bills payable	10,000	20,000	Sundry debtors	50,000	45,000
Outstanding expenses	2,000	1,000	Bills receivable	15,000	20,000
Contingent liability for discounted unmatured bills Rs. 12,500 with P.P. Ltd.			Cash in hand	2,000	1,000
	4,12,000	3,71,000		4,12,000	3,71,000

Following further information is also given :

(*a*) Poona Productions Ltd purchased 2,000 shares of Bombay Productions Ltd, on the date of balance sheets for Rs. 1,80,000 and these are idcluded in investments.

(*b*) Bills receivable of Poona Productions Ltd include Rs. 5,000 bills accepted by Bombay Productions Ltd and bills discounted by Poona Productions Ltd but not matured include Rs. 7,500 worth acceptance by B.P. Ltd.

(*c*) Sundry creditors of Poona Productions Ltd, include Rs. 15,000 due to Bombay Productions Ltd., whereas sundry debtors of Bombay Productions Ltd. include Rs. 25,000 due from Poona Productions Ltd.

(*d*) Remittance of Rs. 10,000 by cheque from Poona Productions Ltd was not received by Bombay Productions Ltd up to the date of balance sheet.

You are required to prepare a consolidated balance sheet after osting the necessary entries and showing the important accounts.

olution :

JOURNAL ENTRIES

		Rs.	Rs.
ost of control A/c	Dr.	1,80,000	
To Investment A/c			1,80,000
eing the elimination of investment de in Bombay Productions Ltd.)			
are capital A/c	Dr.	2,50,000	
To Cost of control A/c			2,00,000
To Minority interest A/c			50,000
ing the elimination of the share tal of the subsidiary)			
eral reserve A/c	Dr.	40,000	
To Cost of control A/c			32,000
To Minority interest A/c			8,000

(Being the transfer of reserve to majority and minority interests).			
Cost of control account	Dr.	52,000	
To Capital reserve A/c			52,000
(Being the transfer of balance in cost of control A/c to capital reserve)			
Bills payable A/c (B.P. Ltd)	Dr.	5,000	
To Bills receivable A/c (P.P. Ltd)			5,000
(Being the elimination of inter-company transaction)			
Remittance in Transit A/c	Dr.	10,000	
To Sundry creditors A/c			10,000
(Being the remittance in transit)			
Sundry creditors (P.P. Ltd)	Dr.	25,000	
To Sundry debtors (B.P. Ltd)			25,000
(Being the elimination of indebtedness within the group)			

Important ledger accounts

(1) COST OF CONTROL ACCOUNT

Investment in B P. Ltd 2,000 Equity shares	Rs. 1,80,000	B P. Ltd Nominal value of 2,000 shraes	Rs. 2,00,000
		Pre-Acquisition surplus :	
Balance transferred to Capital reserve	52,000	General reserve	32,000
	Rs. 2,32,000		Rs. 2,32,000

(2) MINORITY INTEREST

Balance carried forward	Rs. 58,000	B.P Ltd Share Capital 500 shares of Rs. 100 each	Rs. 50,000
		General reserve	8,000
	Rs. 58,000		Rs. 58,000

(3) GENERAL RESERVE—B.P. Ltd

Minority interest	Rs. 8,000	Balance	Rs. 40,000
Cost of control	32,000		
	Rs. 40,000		Rs. 40,000

(4) SHARE CAPITAL—B.P. Ltd

Cost of Control	Rs. 2,00,000	Balance	Rs. 2,50,000
Minority Interest	50,000		
	Rs. 2,50,000		Rs. 2,50,000

(5) INVESTMENT A/C—P.P. Ltd

Balance	Rs. 2,05,000	Cost of control A/c	Rs. 1,80,000
		Balance carried forward	25,000
	Rs. 2,05,000		Rs. 2,05,000

BALANCE SHEET
as on 30th June 1977

Liabilities	*P.P. Ltd* Rs.	*B P Ltd* Rs.	*Assets*	*P.P. Ltd* Rs.	*B.P. Ltd* Rs.
Share capital in Rs. 100 equity shares	3,00,000	2,50,000	Fixed assets : Goodwill	50,000	15,00
Reserves & surplus :			Investments :	2,05,000	10,00
Revenue reserve	50,000	40,000	Current assets :		
Current liabilities :			Stock in hand	90,000	2,80,00
Sundry creditors	50,000	60,000	Sundry debtors	50,000	45,00
Bills payable	10,000	20,000	Bills receivable	15,000	20,00
Outstanding expenses	2,000	1,000	Cash in hand	2,000	1,00
Contingent liability for discounted unmatured bills Rs. 12,500 with P.P. Ltd.					
	4,12,000	3,71,000		4,12,000	3,71,00

Following further information is also given :

(*a*) Poona Productions Ltd purchased 2,000 shares of Bomba Productions Ltd, on the date of balance sheets for Rs. 1,80,00 and these are idcluded in investments.

(*b*) Bills receivable of Poona Productions Ltd include Rs. 5,00 bills accepted by Bombay Productions Ltd and bills discounte by Poona Productions Ltd but not matured include Rs. 7,50 worth acceptance by B.P. Ltd.

(*c*) Sundry creditors of Poona Productions Ltd, include Rs. 15,00 due to Bombay Productions Ltd., whereas sundry debtors c Bombay Productions Ltd. include Rs. 25,000 due from Poon Productions Ltd.

(*d*) Remittance of Rs. 10,000 by cheque from Poona Productior Ltd was not received by Bombay Productions Ltd up to th date of balance sheet.

You are required to prepare a consolidated balance sheet afte posting the necessary entries and showing the important accounts.

Solution :

JOURNAL ENTRIES

		Rs.	Rs.
Cost of control A/c	Dr.	1,80,000	
To Investment A/c			1,80,000
(Being the elimination of investment made in Bombay Productions Ltd.)			
Share capital A/c	Dr.	2,50,000	
To Cost of control A/c			2,00,000
To Minority interest A/c			50,000
(Being the elimination of the share capital of the subsidiary)			
General reserve A/c	Dr.	40,000	
To Cost of control A/c			32,000
To Minority interest A/c			8,000

(Being the transfer of reserve to majority and minority interests).			
Cost of control account	Dr.	52,000	
To Capital reserve A/c			52,000
(Being the transfer of balance in cost of control A/c to capital reserve)			
Bills payable A/c (B.P. Ltd)	Dr.	5,000	
To Bills receivable A/c (P.P. Ltd)			5,000
(Being the elimination of inter-company transaction)			
Remittance in Transit A/c	Dr.	10,000	
To Sundry creditors A/c			10,000
(Being the remittance in transit)			
Sundry creditors (P.P. Ltd)	Dr.	25,000	
To Sundry debtors (B.P. Ltd)			25,000
(Being the elimination of indebtedness within the group)			

Important ledger accounts

(1) COST OF CONTROL ACCOUNT

Investment in B P. Ltd 2,000 Equity shares	Rs. 1,80,000	B.P. Ltd Nominal value of 2,000 shraes	Rs. 2,00,000
		Pre-Acquisition surplus :	
Balance transferred to Capital reserve	52,000	General reserve	32,000
	Rs. 2,32,000		Rs. 2,32,000

(2) MINORITY INTEREST

Balance carried forward	Rs. 58,000	B.P. Ltd Share Capital 500 shares of Rs. 100 each	Rs. 50,000
		General reserve	8,000
	Rs 58,000		Rs. 58,000

(3) GENERAL RESERVE—B.P. Ltd

Minority interest	Rs. 8,000	Balance	Rs. 40,000
Cost of control	32,000		
	Rs. 40,000		Rs. 40,000

(4) SHARE CAPITAL—B.P. Ltd

Cost of Control	Rs. 2,00,000	Balance	Rs. 2,50,000
Minority interest	50,000		
	Rs. 2,50,000		Rs. 2,50,000

(5) INVESTMENT A/C—P P. Ltd

Balance	Rs 2,05,000	Cost of control A/c	Rs. 1,80,000
		Balance carried forward	25,000
	Rs 2,05,000		Rs 2,05,000

(6) SUNDRY CREDITORS—P.P. Ltd

Sundry debtors (B.P. Ltd)	Rs. 25,000	Balance	Rs. 50,000
Balance carried forward	35,000	Remittance in transit	10,000
	Rs. 60,000		Rs. 60,000

(7) SUNDRY DEBTORS—B. P. Ltd

Balance	Rs. 45,000	Sundry creditors (P. P. Ltd)	Rs. 25,000
		Balance carried forward	20,000
	Rs. 45,000		Rs. 45,000

(8) BILLS RECEIVABLE—P. P. Ltd

Balance	Rs. 15,000	Bills payable (B. P. Ltd)	Rs. 5,000
		Balance carried forward	10,000
	Rs. 15,000		Rs. 15,000

(9) BILLS PAYABLE—B. P. Ltd

Bills receivable (P. P. Ltd)	Rs. 5,000	Balance	Rs. 20,000
Balance carried forward	15,000		
	Rs. 20,000		Rs. 20,000

POONA PRODUCTION LTD AND ITS SUBSIDIARY BOMBAY PRODUCTION LTD

CONSOLIDATED BALANCE SHEET

as on 30th June, 1977

Liabilities		Rs.	*Assets*		Rs.
Share capital in Rs. 100 equity shares		3,00,000	Fixed assets :		
Reserves and surplus :			Goodwill P. P. Ltd	50,000	
Capital reserve		52,000	B. P. Ltd	15,000	65,000
Revenue reserve—P. P. Ltd		50,000	Investments :		
Current liabilities :			P. P. Ltd	25,000	
Sundry creditors			B. P. Ltd	10,000	35,000
P. P. Ltd	35,000		Current assets :		
B. P. Ltd	60,000	95,000	Stock in hand		
Bills payable :			P. P. Ltd	90,000	
P. P. Ltd	10,000		B. P. Ltd	2,80,000	3,70,000
B. P. Ltd	15,000	25,000	Sundry debtors :		
Outstanding expenses :			P. P. Ltd	50,000	
P. P. Ltd	2,000		B. P. Ltd	20,000	70,000
B. P. Ltd	1,000	3,000	Bills receivable :		
Minority Interest		58,000	P. P. Ltd	10,000	
contingent liability for discounted unmatured bill with P. P. Ltd. Rs. 5,000 (*)			B. P. Ltd	20,000	30,000
			Cash in hand :		
			P. P. Ltd	2,000	
			B. P. Ltd	1,000	3,000
			Remittance in transit		10,000
Rs.		5,83,000		Rs.	5,83,000

(*) Contingent liability for Rs. 7,500 is eliminated as it is within the groups.

Consolidation at a Later Date

When consolidation is at a later date, as explained earlier, profits will have to be divided into pre- and post-acquisition profits. From the general reserve and profit and loss account pre-acquisition profits will be transferred to minority interest account and cost of control accounts. In the case of post-acquisition profits, only the minority interest will be transferred and that leaves the balance of holding company's share of post-acquisition profits in the two accounts, namely, general reserve and profit and loss account. This does not call for any new entries.

However, the subsidiary company may issue dividends and/or bonus shares either from out of pre-acquisition or post-acquisition profits. The treatment to be given and the entries to be made are discussed in the next three sections at the end of which a comprehensive illustration is also given.

10—BONUS SHARES

Issue of bonus shares by the subsidiary company will increase the number of shares in the hands of the holding company. Its treatment will depend upon the source from where bonus shares are issued. These may be as follows :

(a) Issue of bonus shares out of pre-acquisition profits

In this case there will be no effect on accounting treatment because while calculating the cost of control, when on the one hand holding company's share in the pre-acquisition profit is reduced (because of capitalisation of profits), on the other hand the paid-up value of shares held increases. Thus, there is no effect on cost of control of the bonus shares issued out of pre-acquisition profits.

Illustration 17

S Ltd has the capital of Rs 3,00,000 in shares of Rs 10 each out of which *H* Ltd, purchased 80% at Rs. 3,80,000. The profits of *S* Ltd, at the time of purchase of shares by *H* Ltd, were Rs. 1 20,000. The *S* Ltd, decided to make a bonus issue out of pre-acquisition profits of one share of *Rs. 10 each fully paid for every three shares held*. Calculate the cost of control for *H* Ltd, before the issue of bonus shares and after the issue of bonus shares.

Solution :

		Rs
(i) *Before the issue of bonus shares* :		
Cost of shares		3,80,000
Less Paid-up value of shares	2,40,000	
Share in capital profits $\frac{80}{100} \times 1,20,000$	96,000	
		3,36,000
Cost of control		Rs. 44,000

(*ii*) *After the issue of bonus shares* :

		Rs.
Cost of shares		3,80,000
Less Paid up value of shares :		
Shares already held	2,40,000	
Add Bonus shares	80,000	
		3,20,000
		60,000
Less Share in capital profits : 80/100 × Rs. 20,000[1]		16,000
Cost of control		Rs. 44,000

Illustration 18

A Ltd acquired 1,600 ordinary shares of Rs. 100 each in B Ltd, on 31st December 1969. The summarised balance sheets of A Ltd and B Ltd as on that date were as under :

BALANCE SHEETS OF A Ltd AND B Ltd

	A Ltd Rs.	*B Ltd* Rs.		*A Ltd* Rs.	*B Ltd* Rs.
Capital 5,000 ordinary shares of Rs. 100 each	5,00,000	...	Land and buildings	1,50,000	1,80,000
2,000 ordinary shares of Rs. 100 each		2,00,000	Plant and machinery	2,40,000	1,09,400
Capital reserve			Investments in B Ltd at cost	3,40,000	...
General reserve	2,40,000	1,20,000	Stocks	1,20,000	36,000
rofit and loss A/C	57,200	36,000	Debtors	44,000	40,000
ank over draft	80,000	...	Bills receivable (including Rs. 3,000 from B Ltd)	15,800	...
ills payable (including Rs. 4,000 to A Ltd	...	8,400	Cash and bank	14,500	8,000
reditors	47,100	9,000			
	9,24,300	3,73,400		9,24,300	3,73,400

You are supplied the following information.

(*i*) *B* Ltd had made a bonus issue on 31st December 1969 of one ordinary share for every two shares held by its shareholders. Effect has yet to be given in the accounts for this issue.

(*ii*) The Directors are advised that Land and buildings of B Ltd are under-valued by Rs. 20,000 and Plant and machinery of B Ltd over-valued by Rs. 10,000. These assets have to be adjusted accordingly.

(*iii*) Sundry creditors of A Ltd, include Rs. 12,000 due to *B* Ltd.

You are required to prepare the Consolidated Balance Sheet as on ecember 1969.

[B. Com. (Hons.) Calcutta 1969]

1. Because of bonus issue of 1/3rd of pre-acquisition profits the remaining uisition profits are Rs. 1,20,000 − 1,00,000 = Rs. 20,000.

Solution :

(A) *TUTORIAL NOTES*

(1) COST OF CONTROL ACCOUNT

	Rs.			Rs.
Investments in B Ltd. at cost	3,40,000	Share capital B Ltd.		
		Original shares	1,60,000	
		Bonus shares	80,000	
				2,40,000
		Capital reserve (4/5)		16,000
		Profit and loss A/c (4/5)		28,800
		Revaluation of assets (4/5)		8,000
		Balance-transferred to goodwill		47,200
	3,40,000			3,40,000

(2) MINORITY INTEREST

	Rs.		Rs.
Balance carried forward	73,200	Share capital in B Ltd.	60,000
		Capital reserve	4,000
		Profit and loss A/c	7,200
		Revaluation of assets	2,000
	73,200		73,200

(3) CAPITAL RESERVE

	Rs.		Rs.
To share capital B Ltd. —Bonus Issue	1,00,000	Balance	1,20,000
To Cost of control (4/5)	16,000		
To Minority interest (1/5)	4,000		
	1,20,000		1,20,000

(4) SHARE CAPITAL—B LIMITED

	Rs.		Rs.
Cost of control	2,40,000	Balance	2,00,000
Minority interest	60,000	Capital reserve—bonus issue	1,00,000
	3,00,000		3,00,000

(5) PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
Cost of control A/c (4/5)	28,800	Balance	36,000
Minority interest (1/5)	7,200		
	36,000		36,000

(6) REVALUATION OF ASSETS

	Rs.		Rs.
Plant and machinery	10,000	Land and buildings	20,000
Cost of control A/c (4/5)	8,000		
Minority interest (1/5)	2,000		
	20,000		20,000

(B) CONSOLIDATED BALANCE SHEET OF A LTD AND ITS SUBSIDIARY B LTD

as at 31st December 1962

Liabilities		Rs.
5,000 Ordinary shares of Rs. 100 each		5,00,000
Reserve and surplus :		
General reserve A Ltd		2,40,000
Profit and loss A/c B Ltd		57,200
Secured and unsecured loans :		
Bank overdraft		80,000
Current liabilities and provisions :		
Sundry creditors		
A Ltd	47,100	
B Ltd	9,000	
	56,100	
Less : Inter company transactions	12,000	44,100
Bills payable B Ltd	8,400	
Less : Inter-company transactions	3,000	5,400
Minority interest		73,200
		Rs. 9,99,900

Assets			Rs.
Fixed assets			
Goodwill			47,200
Land and buildings			
A Ltd		1,50,000	
B Ltd	1,80,000		
Add	20,000	2,00,000	3,50,000
Plant and machinery			
A Ltd		2,40,000	
B Ltd	1,09,400		
Less	10,000	99,400	3,39,400
Current Assets :			
Stock-in-hand			
A Ltd		1,20,000	
B Ltd		36,000	1,56,000
Sundry debtors			
A Ltd		44,000	
B Ltd		40,000	
		84,000	
Less Inter-company transactions		12,000	72,000
Bills receivable A Ltd		15,800	
Less due from B Ltd		3,000	12,800
Cash and bank			
A Ltd		14,500	
B Ltd		8,000	22,500
		Rs.	9,99,900

(*b*) Issue of bonus shares out of post-acquisition profits

Where a subsidiary company capitalizes profits by the issue of bonus shares out of the post-acquisition profits, it is necessary that holding company's share in the revenue profits of the subsidiary company be calculated only *after making an adjustment for such bonus shares from the post-acquisition profits*. This will automatically have the effect of reducing share of holding company in the post-acquisition profits of the subsidiary company. However, in this case the cost of goodwill will be reduced because of the increase in paid-up value of shares (without increasing the cost of shares and without reducing the pre-acquisition profits of the subsidiary company).

Illustration 19

BALANCE SHEET

	H Rs.	*S* Rs.		*H* Rs.	*S* Rs.
Share capital	2,00,000	40,000	30,000 shares in *S* Ltd.	60,000	—
Reserves	40,000	10,000	Assets	2,05,000	64,000
Profits	25,000	14,000			
	2,65,000	64,000		2,65,000	64,000

S Ltd had the credit balance of Rs. 10,000 in the reserves when *H* Ltd acquired shares in *S* Ltd. *S* Ltd capitalised its Rs. 10,000 (all out of profits earned after the acquisition of its shares by *H* Ltd), by making a bonus issue of one share for every four shares held. You are required to calculate cost of goodwill before and after the declaration of bonus issue. Also make the consolidated balance sheet.

Solution:

(A) TUTORIAL NOTES

(1) *Cost of control before the issue of bonus shares:*

Cost of shares	Rs	60,000
Less Paid-up value of shares		30,000
		30,000
Less Share in capital profits (3/4 × Rs. 10,000)		7,500
Cost of control	Rs.	22,500

(2) *Cost of control after the bonus issue:*

		Rs
Cost of shares		60,000
Less Paid-up value of shares		30,000
		30,000
Less Increase in shares because of bonus issue		7,500
		22,500
Less Share in capital profits—3/4 × 10,000		7,500
Cost of control	Rs.	15,000

(3) *Minority Interest:*

		Rs.
Share capital held by outsiders—1/4 × Rs. 50,000		12,500
Add $\frac{1}{4}$ × (Rs. 10,000 + Rs 4,000)		3,500
	Rs.	16,000

(4) *Holding company's share in revenue profits:*

	Rs.
Revenue profits of *S* Ltd after bonus issue	4,000
Holding company's share thereof	3,000

(B) CONSOLIDATED BALANCE SHEET as on ..

		Rs.				Rs
Share capital		2,00,000	Cost of control			15,000
Reserve		40,000	Assets : *H*		2,05,000	
Profits	25,000		*S*		63,000	[illegible]
Add Share in *S* Ltd.	3,000					
		28,000				
Minority Interest		15,000				
	Rs.	2,83,000				

From the discussion it is clear that no new

11—FUTURE INCOME TAX RESERVE

Future income tax reserve set aside by the subsidiary companies should neither be treated as accumulated pre-acquisition profits nor as a part of post-acquisition profits. It should be treated at par with liabilities and provisions for income tax of all subsidiary companies are grouped at one place for consolidated balance sheet purposes.

12—TREATMENT OF DIVIDEND

Unclaimed dividend

Unclaimed dividend is that part of dividend which has been declared but not claimed so far. If unclaimed dividend appears in the balance sheet of the subsidiary company, it should be divided into two parts : (*i*) dividend not claimed by the holding company or any other company belonging to the group. and (*ii*) dividend not claimed by other shareholders not belonging to the group). The first part of unclaimed dividend will be cancelled by the corresponding unclaimed dividend appearing as an asset in the books of the holding company or any other company belonging to the group. The second part of the unclaimed dividend, however, will be appearing in the consolidated balance sheet.

Proposed dividend

When a subsidiary company proposes the dividend it debits its profit and loss appropriation account and credits proposed dividend account. Since the proposed dividend is in respect of all the shares, a part of it belongs to the holding company. In the consolidated balance sheet, to show a clear picture, proposed dividend's that part which belongs to the holding company may be added to the holding company's share in other profits of the subsidiary company and the rest to the minority interest.

Payment of dividend

Where the holding company receives dividend from the subsidiary company, then its treatment in the holding company's books and answer to the question whether such dividend shall be further available as dividend to the shareholders of the holding company will depend upon the following possibilities relating to the source from which such dividends have been paid :

(*a*) Payment of complete dividend out of *pre-acquisition profits*,

(*b*) Payment of complete dividend out of *post-acquisition profits*,

(*c*) Payment of dividend out of pre-acquisition profits after exhausting the whole revenue profit, or *vice versa*,

(*d*) Payment of dividend out of pre- and post-acquisition profits after using them proportionately.

These alternative treatments have been dealt with as follows :

When dividends are actually paid by the subsidiary company, they are paid to the minority shareholders as well as majority shareholders. Thus there is no effect of payment of any dividend on the calculations of minority interest or share of the holding company in the profits of subsidiary company because this is a discharged liability. The only point under consideration is that which relates to the proper exhibition of that portion

of dividend which has been received by the holding company from the subsidiary company. Since holding company has received dividend it increases the cash position on the asset side of the balance sheet and some profit (revenue or capital) on the liability side. Our problem at this moment is to find out the proper place where we could keep the dividend received by the holding company from the subsidiary company. This is as follows :

(*a*) If the whole of the dividend is from the *pre-acquisition profits*, it must be treated as capital gain and must be used either for reducing the cost of shares (*i.e.*, ultimately for reducing goodwill) or for increasing capital reserve. The dividend so received is not available to the shareholders of the holding company and thus cannot be taken to the revenue profits of the holding company.

Usually such dividends are credited to the profit and loss account of the holding company and therefore the following rectification entry has to be made

Debit Profit and loss account of the holding company

Credit Cost of Control Account

(*b*) If the whole of the dividend is received from the post-acquisition profits, it is again available to the shareholders of the holding company and can be credited to the profit and loss account of the holding company.

Sometimes the dividend migh. not have been paid in which case the amount stands to the credit of proposed dividends account after debiting the same to the current year's profit and loss account. In that case such a dividend account must be dealt with at the time of consolidation. The procedure is to close the dividend account by transferring the minority share to 'Minority Interest' account and writing back the holding company's share to the profit and loss account of the subsidiary. The entry for that being :

Debit Dividends Account

Credit Minority interest account (with their share)

Credit Profit and loss account of the subsidiary (with the holding company's share)

(*c*) If dividend has been declared first out of the post-acquisition profits and then out of pre-acquisition profits, the dividend received will be divided in that ratio and so far as it relates to the pre-acquisition profits, it will be taken to the cost of control. If by mistake it has already been taken to profit and loss account of the holding company, a correcting entry will be passed. The entry being

Debit Profit and loss account (holding company)

Credit Cost of control account

(*d*) In the fourth case also the treatment is the same as suggested above.

Illustration 20

H Ltd acquired Rs. 4,00,000 shares of Rs. 10 each at Rs. 13 each in *S* Ltd on 1st October, 1969. The issued capital of *S* Ltd consisted of Rs. 5,00,000. For the year ending 31st December 1969, *S* Ltd declared a dividend of 20% on the paid-up capital. The profit and loss account of *S* Ltd showed the following position :

	Rs.
Balance of profit on 1-1-1969	3,00,000
Profit earned during the year	2,40,000

You are required to give journal entries for the receipt of dividend when all the above possibilities are considered.

Solution :

(*a*) *Calculation of post-acquisition profits :*

Profit earned during 1969.	Rs. 2,40,000
Profit for 3 months (Post-acquisition profits)	Rs. 60,000

(*b*) *Calculation of pre-acquisition profits :*

Rs. 3,00,000+(Rs. 2,40,000−Rs. 60,000) Rs. 4,80,000

(*c*) *Calculation of total dividend to be paid by S Ltd :*

$\frac{20}{100}\times$ Rs. 5,00,000 Rs. 1,00,000

(*d*) *Calculation of holding company's share in total dividend :*

$\frac{4}{5}\times$ Rs. 1,00,000 Rs. 80,000

1st Alternative : When post-acquisition profits are used first :

In order to enable company declare the total dividend of Rs. 1.00.000, the company will use first Rs. 60,000 (post-acquisition profit) and remaining Rs. 40,000 from Rs. 4,80,000 (pre-acquisition profits). The holding company will get 4/5 of each type of profit. Entry is :

Cash (4/5×Rs. 1,00,000)	Dr.	Rs. 80,000	
To Investment (4/5×Rs. 40,000)			Rs. 32,000
To Profit and Loss Account (4/5×Rs. 60,000)			48,000

2nd Alternative : When pre-acquisition profits are used first :

In order to declare Rs. 1,00,000 dividend, if company uses the pre-acquisition profits, it finds that there is sufficient amount and there is no necessity to fall upon the post-acquisition profits. The whole of the dividend can be declared out of the Rs. 4,80,000 pre-acquisition profits. The receipt of such dividend in the hands of company is a capital receipt. The entry will be :

Cash	Dr.	Rs. 80,000	
To Investments Account $\left(\frac{4}{5}\times \text{Rs.}1,00,000\right)$			Rs. 80,000

3rd Alternative : When profits of 1969 have been used :

During 1969	Post-acquisition profits are	Rs.	60,000
And	Pre-acquisition profits are		1,80,000
∴	Total profits of 1969 are	Rs.	2,40,000

In this case the total dividend received by *H* Ltd, *i.e.*, Rs. 80,000 will be presumed to have been paid proportionately out of pre- and post-acquisition profits. Thus, the holding company receives :

$\frac{60,000}{2,40,000} \times$ Rs. 80,000 = Rs. 20,000 out of post-acquisition profits

$\frac{1,80,000}{2,40,000} \times$ Rs. 80,000 = Rs. 60,000 out of pre-acquisition profits

Entry is :

Cash	Dr. Rs. 80,000	
To Investment account		Rs. 60,000
To Profit and loss account		20,000

4th Alternative : When total profits have been used proportionately :

Out of the total profits Rs. 5,40,000, the post-acquisition profit is Rs. 60,000 and pre-acquisition profit is Rs 4,80,000. Thus the total dividend of Rs. 80,000 will be received in that ratio :

Cash	Dr Rs. 80,000	
To Investment $\frac{4,80,000}{5,40,000} \times$ Rs 80,000		Rs. 71,111
To Profit and loss account $\frac{60,000}{5,40,000} \times$ Rs. 80,000		[illegible]

Illustration 21

From the following balance sheet of a holding company and its subsidiary prepare a consolidated balance sheet.

BALANCE SHEETS
as on 31-3-1975

	H Ltd	*S* Ltd		*H* Ltd	*S* Ltd
	Rs.	Rs.		Rs.	[illegible]
Share capital Rs 10 each paid	5,00,000	2,00,000	Goodwill	[illegible]	[illegible]
			Machinery	[illegible]	[illegible]
General reserve	80,000	60,000	Stock	[illegible]	[illegible]
Profit & loss A/c	90,000	70,000	Debtors	[illegible]	[illegible]
Sundry creditors	50,000	40,000	Cash and bank	[illegible]	
Outstanding expenses	20,000	10,000	Investment 16,000 shares in S Ltd	[illegible]	
Rs.	7,40,000	3,80,000	Rs.	[illegible]	[illegible]

When [illegible]

Debtors of *H* Ltd include Rs. 20,000 due from *S* Ltd, whereas creditors of *S* Ltd include Rs. 15,000 due to *H* Ltd, difference being accounted for by a cheque *intransit.*

[B. Com. (Hons.) Calcutta 1975)

(A) **Tutorial Notes**

(1) INVESTMENT ACCOUNT

Balance	Rs. 1,90,000	Dividends from *S* Ltd	Rs. 16,000
		Cost of control A/c	1,74,000
	Rs. 1,90,000		Rs. 1,90,000

(2) COST OF CONTROL ACCOUNT

Investment in *S* Ltd	Rs. 1,74,000	Share capital in *S*. Ltd	Rs. 1,60,000
Balance transferred to Capital reserve	26,000	Pre-acquisition profits :	
		General reserve (4/5)	32,000
		Profit and loss A/c (4/5) (A)	8,000
	Rs. 2,00,000		Rs. 2,00,000

(3) MINORITY INTEREST

Balance carried forward	Rs. 66,000	Share capital in *S* Ltd	Rs. 40,000
		General reserve	12,000
		Profit and loss A/c	14,000
	Rs. 66,000		Rs. 66,000

(4) GENERAL RESERVE (*S* Ltd)

Minority interest (1/5)	Rs. 12,000	Balance	Rs 60,000
Cost of control A/c 4/5×40,000	32,000		
Balance carried forward	16,000		
	Rs. 60,000		Rs. 60,000

(5) PROFIT AND LOSS A/C (*S* Ltd)

Minority interest (1/5)	Rs. 14,000	Balance	Rs. 70,000
Cost of control A/c (A) 4/5 of 10,000	8,000		
Balance carried forward	48,000		
	Rs. 70,000		Rs. 70,000

(A) Profit and loss account balance as on date of acquisition	Rs. 30,000
Less : Dividends paid from pre-acquisition profits	20,000
Balance of pre-acquisition profits	10,000
Holding company's share transferred to cost of control A/c (4/5 of Rs. 10,000)	8,000

(6) PROFIT AND LOSS ACCOUNT (*H* Ltd)

Dividends from *S* Ltd transferred to investment A/c	Rs. 16,000	Balance	Rs. 90,000
Balance carried forward	74,000		
	Rs. 90,000		Rs. 90,000

(7) SUNDRY CREDITORS (*S* Ltd)

Balance Carried forward	Rs. 45,000	Balance	Rs. 40,000
		Cash in transit	5,000
	Rs. 45,000		Rs. 45,000

(8) CONSOLIDATED BALANCE SHEET OF *H*. LTD WITH ITS SUBSIDIARY *S*. LTD as on 31-12-1975

Liabilities		Rs.	*Assets*		Rs.
SHARE CAPITAL :			FIXED ASSETS :		
50,000 shares of Rs. 10 each fully paid.		5,00,000	Goodwill		
RESERVES AND SURPLUS :			*H* Ltd	30,000	
Capital Reserve		26,000	*S* Ltd	10,000	40,000
General Reserve			Machinery :		
H Ltd	80,000		*H* Ltd	3,00,000	
S Ltd	16,000	96,000	*S* Ltd	1,50,000	4,50,000
Profit and Loss A/c :			INVESTMENTS		...
H Ltd	74,000		CURRENT ASSETS, LOANS AND ADVANCES		...
S Ltd	48,000	1,22,000	*Stock in trade* :		
SECURED AND UN-SECURED LOANS :		...	*H* Ltd	80,000	
CURRENT LIABILITIES AND PROVISIONS :			*S* Ltd	50,000	1,30,000
Sundry creditors			Sundry debtors		
H Ltd	50,000		*H* Ltd	1,20,000	
S Ltd	45,000		*S* Ltd	1,60,000	
	95,000			2,80,000	
Less Inter-company transactions	20,000	75,000	*Less* Inter-company transactions	20,000	2,60,000
Outstanding expenses .			Cash in transit		5,000
H Ltd	20,000		Cash and bank :		
S Ltd	10,000	30,000	*H* Ltd	20,000	
Minority interest		66,000	*S* Ltd	10,000	30,000
	Rs	9,15,000		Rs.	9,15,000

CHANGE IN PARENT COMPANY'S EQUITIES

Purchase of Shares

It has been, so far, assumed that controlling interest in the subsidiary company was acquired by the holding company by one purchase. But, on some occasions, the controlling interest in a subsidiary company may not be established by the first purchase of its shares. In such cases a succession of purchases is required by the parent company to effectuate control. Where shares are purchased on different dates it is important to decide the method of calculating the cost of control The Committee on

Accounting Procedure, American Institute of Certified Public Accountants, gives the following opinion :

> "when one company purchases two or more blocks of stock of another company at various dates and eventually obtains control of the other company, the date of acquisition (for purposes of preparing consolidated statement) depends on the circumstances. If two or more purchases are made over a period of time, the earned surplus of the subsidiary at acquisition should generally be determined on a step by step basis."

However, the bulletin continues :

> "......if small purchases are made over a period of time and then a purchase is made which results in control, the date of the latest purchase, *as a matter of convenience*, may be considered as the date of acquisition"*

The following illustration gives the working of calculations when the controlling interest is acquired in three block purchases.

Illustration 22

Company *H* acquires shares of company *S* according to the following schedule :

Date	*Number of shares*	*Cost*
January 1, 1967	200	Rs. 30,000
January 1, 1968	100	Rs. 17,500
January 1, 1969	100	Rs. 20,000

On January 1, 1967, company *S* had Rs. 50,000 shares of Rs. 100 each and retained profits of Rs. 20,000. Annual profits for 1967, 1968 and 1969 are assumed to be Rs. 10,000 in each year.

You are required to calculate the cost of cyntrol.

Solution :

	First Block Rs.	*Second Block* Rs.	*Third Block* Rs.	*Total* Rs.
Cost of shares	30,000	17,500	20,000	67,500
Less Paid up value of shares	20,000	10,000	10,000	40,000
	10,000	7,500	10,000	27,500
Less Shares in pre-acquisition profits	8,000[1]	6,000[2]	8,000[3]	22,000
Cost of Control	20,00	1,500	2,000	5,500

[1] $\frac{20,000}{50,000} \times$ Rs. 20,000 = Rs. 8,000.

[2] $\frac{10,000}{50,000} \times$ Rs. 30,000 = Rs. 6,000

[3] $\frac{10,000}{50,000} \times$ Rs. 40,000 = Rs. 8,000

When first 200 shares were purchased capital profits were only Rs. 20,000. When second set of 100 shares was purchased capital profits were Rs. 30,000, *i.e.*, Rs. 20,000+Rs. 10,000 and similarly, for the third purchase capital profits were Rs. 40,000.

*Accounting Research Bulletin No. 51 (New York, 1955), p. 44.

Sale of shares :

If holding company reduces its control by disposing of a part of its investment in the subsidiary company, the accounting problem is not a complicated one. The following guideline is suggested :

(a) Calculate the sale price of shares sold and compare it with its cost price. The difference, if any, is taken as profit or loss on sale. If there is a loss it is debited to cost of control and if there is a gain it can either be kept separate under the heading 'Investment Fluctuation Fund' or can be used for reducing the cost of control.

(b) Calculate minority interest and cost of control on the basis of shares *left* unsold on the date of consolidation.

Following illustration gives the working :

Illustration 23

From the following balance sheet and information prepare a consolidated balance sheet as on 31st December, 1969.

BALANCE SHEET
as on 31st December, 1969

	H Rs.	*S* Rs.		*H* Rs.	*S* Rs.
Share capital Rs. 10 each	1,00,000	20,000	Sundry assets	93,000	32,000
Investment reserve	3,000		Share in *S* : 1,200 at cost	18,000	
Profit and loss :					
1st Jan. 1969	6,000	7,200			
Profit for year	2,000	4,800			
Rs	1,11,000	32,000	Rs.	1,11,000	32,000

H bought 1,600 shares in *S* at Rs. 15 per share when the profit and loss account of the latter stood at Rs. 4,400 and sold 400 of them on 30th June, 1969 at Rs. 22·50 per share crediting the profit on sale to the investment reserve account

Solution :

(A) Tutorial Notes

(1) *Calculation of profit on sale :*

	Rs.
Sale price of 400 shares sold at Rs. 22·50 per share	9,000
Less Cost price of shares at Rs. 15 per share	6,000
Profit on sale transferred to investments fluctuation account (already shown in the balance sheet)	Rs. 3,000

(2) *Calculation of cost of control :*

	Rs
This is to be calculated on the basis of existing number of shares	
Cost price of 1,200 shares at Rs. 15 per share	18,000
Less Paid-up value of shares	12,000
	6,000

Less Share of capital profit, *i.e.*, $\frac{1,200}{2,000} \times$ Rs. 4,400		2,640
Cost of control	Rs.	3,360

(3) *Calculation of minority interest :*

		Rs.
Number of shares held by outsiders 800 × Rs. 10.		8,000
Add Proportionate share of all existing reserves $\frac{800}{2,000} \times$ (Rs. 7,200 + Rs. 4,800)		4,800
Minority interest	Rs.	12,800

(B) CONSOLIDATED BALANCE SHEET
as on 31st December, 1969

		Rs.			Rs.
Share capital		1,00,000	Cost of control		3,360
Investment fluctuation reserve		3,000	Sundry assets :		
Minority interest		12,800	*H*	93,000	
Profit and loss account :			*S*	32,000	
H company on 1st Jan.	6,000				1,25,000
During the year	2,000				
Share from *S* Ltd	4,560				
		12,560			
Rs.		1,28,360	Rs.		1,28,360

CONSOLIDATION OF PROFIT AND LOSS ACCOUNTS

The following steps have to be taken to consolidate the profit & loss accounts of the holding company and its subsidiary :

1. Prepare consolidated profit and loss account in columnar form. Draw on each side one column for each company, one column for adjustments and one for total.

2. Eliminate inter-company transactions in the total column, by giving their details in the column for adjustments. Thus, if S. Ltd., has paid Rs. 10,000 as interest out of which Rs. 5,000 has been received by H. Ltd., enter in the total column on the debit side only Rs. 5,000 representing the amount paid to outsiders.

3. Determine the separate profit or loss of each company in the usual manner.

4. Calculate the following amounts on the basis of the profit disclosed by the profit and loss account of the subsidiary, without any adjustment for inter-company transactions :

(*a*) the amount of share of outsiders in current year's profit of the subsidiary ;

(*b*) the amount which relates to the pre-acquisition period and is to be treated as capital profit ; and

(*c*) stock reserve.

5. Debit the amounts calculated in fourth step in the total column of the consolidated profit and loss account. The balance left in the total column will be the current year's profit to be taken to the consolidated balance sheet.

Illustration 24

H Ltd. held three-fourths of the ordinary share capital of *S* Ltd. which it acquired on 31st December 1975. The balances standing to the credit of the profit and loss accounts of the respective companies on 31st December, 1977 were as under.

	H Ltd Rs.	*S* Ltd Rs.
Net profit for 1977	3,600	2,400
Balance brought forward from the previous year	6,000	7,200
Rs.	9,600	9,600

On 31st December, 1975, the date of acquisition, the profit and loss account of *S* Ltd showed a credit balance of Rs. 2,400.

Prepare a consolidated profit and loss account for the year ended 31st December, 1977.

Solution :

CONSOLIDATED PROFIT AND LOSS ACCOUNT
for the year ending 31st December 1977

			Rs.				Rs.
Minority Interest				Net profit for 1977			
Profits of 1977 (1/4)		600		*H* Ltd		3,600	
Profits of previous year	7,200			*S* Ltd		2,400	
Less pre-acquisition profits	2,400						6,000
	4,800			Profits of earlier years remaining undistributed			
				H Ltd		6,000	
				S Ltd	7,200		
1/4th of	4,800	1,200		*Less* pre-acquisition profits	2,400	4,800	10,800
			1,800				
Balance carried forward			15,000				
		Rs.	16,800			Rs.	16,800

From the consolidated profit and loss account pre-acquisition profits and the share of minority are eliminated. Pre-acquisition profits are eliminated because these would have been transferred from the profit and loss account of the subsidiary to the cost of control account and minority interest while constructing the consolidated balance sheet.

The previous illustration can also be shown in the form of the table given below :

	H Ltd Rs	*S* Ltd Rs.	Total Rs.
Final balance on profit and loss A/c	9,600	9,600	19,200
Less : Minority Interest in 1977 profits		(−)600	(−)600
	9,600	9,000	18,600
Less : Minority interest of previous profits of *S* Ltd excluding Pre-acquisition profits		(−)1,200	(−)1,200
	9,600	7,800	17,400
Less : Pre-acquisition profit		(−)2,400	(−)2,400
	9,600	5,400	15,000

Inter-company dividends

There is no need to show the inter-company dividends in the consolidated profit and loss account. Dividends receivable by the holding company appear as credit item in the profit and loss account of the holding company. They also appear as debit items in the profit and loss account of the subsidiary and, therefore, in consolidation each cancels out the other.

However, dividends paid from out of pre-acquisition profits must be credited to Investment Account (or Cost of Control Account). If they have been wrongly credited to profit and loss account of the holding company, the same must be transferred either to the investment account or cost/of control account.

Illustration 25

On 1st January 1976 *H* Ltd acquired 800 shares of *S* Ltd. Total capital of *S* Ltd comprised 10,000 equity shares of Rs. 10 each. The profit and loss accounts of *H* Ltd and *S* Ltd for the year 1976 appeared as under :

PROFIT AND LOSS ACCOUNT—H LTD

	Rs.		Rs.
Balance C/d	24,000	Net profit for the year	16,000
		Dividend receivable from *S* Ltd	8,000
	Rs. 24,000		Rs. 24,000
		Balance b/d	24,000

PROFIT AND LOSS ACCOUNT OF *S* LTD

	Rs.		Rs.
Proposed dividend	10,000	Net profit for the year	12,000
Balance c/d	2,000		
	Rs. 12,000		12,000
		Balance b/d	Rs. 2,000

CONSOLIDATED PROFIT AND LOSS ACCOUNT OF *H* LTD & *S* LTD

		Rs.			Rs.
Minority interest			Net profit for the year		
2/10th of Rs.	12,000=2,400		*H* Ltd	16,000	
Dividend	2,000		*S* Ltd	12,000	28,000
Undistributed Profit	400	2,400			
Balance c/f		25,600			
		Rs. 28,000			28,000
			Balance b/f		Rs. 25,600

Inter-company dividends including those payable to minority shareholders are eliminated. This is because the minority share in total profits include the dividend of Rs. 2,000 due to them.

Illustration 26

The balance sheets of *H* & Co Ltd and *S* & Co Ltd as at 31st December, 1976 were as follows :

Capital and Liabilities	H & Co Ltd Rs.	H & Co Ltd Rs.	S & Co Ltd Rs.	S & Co Ltd Rs.
Paid-up capital in shares of Rs. 10 each, fully paid	5,00,000		2,00,000	
Reserves	1,50,000		...	
Profit and loss appropriation account	1,70,000	8,20,000	Dr. 80,000	1,20,000
Long-term liabilities	80,000			
Current liabilities	1,50,000	2,30,000	2,00,000	2,00,000
Rs.		10,50,000		3,20,000

Assets	H & Co Ltd Rs.	S & Co Ltd Rs.
Goodwill	1,00,000	20,000
Fixed assets	4,50,000	1,10,000
Current assets	5,00,000	1,90,000
	10,50,000	3,20,000

On 1st January, 1971 H & Co Ltd purchased 75 per cent of the shares of S & Co Ltd for the sum of Rs. 50,000. On February 1971, H & Co Ltd paid a dividend at the rate of 10 per cent per annum for the preceding year. On 31st March, 1977 S & Co Ltd issued debentures to the amount of Rs. 1,00,000 carrying interest @ 6 per cent per annum payable half-yearly. H & Co Ltd subscribed for one-half of the issue. The results of the two companies for the year ended 31st December, 1977 were as follows, both companies having brought to account the accrued interest on debentures :

	H & Co Ltd Rs.	S & Co Ltd Rs.
Gross profit	3,20,000	1,00,000
Other income	7,750	—
Income from subsidiary	2,250	—
	3,30,000	1,00,000
Expenses	2,00,000	1,20,000
Net profit/loss	1,30,000	(—) 20,000

The respective balance sheets as at 31st December, 1977 were as follows

Liabilities	H & Co Ltd Rs	H & Co Ltd Rs	S & Co Ltd Rs	S & Co Ltd Rs
Paid-up capital in shares of Rs 10 each fully paid	5,00,000		2,00,000	
Reserves	1,50,000		Dr 1,00,000	
Profit and loss appropriation A/c	2,50,000	9,00,000		1,00,000
Long-term liabilities	70,000		1,00,000	
Current liabilities	1,50,000	2,20,000	60,000	1,60,000
Rs		11,20,000		2,60,000

Solution :

CONSOLIDATED PROFIT AND LOSS ACCOU S OF *H* & CO LTD AND ITS SUBSIDIARY *S* & CO LTD

for the year ending 31st December 1977

	H & Co Rs.	*S* & Co Rs.	Adjustment Rs.	Total Rs.		*H* & Co Rs.	*S* & Co Rs.	Adjustment Rs.	Total Rs.
To Expenses	2,00,000	1,20,000	2,250	3,17,750	By Gross Profit	3,20,000	1,00,000	—	4,20,000
,, Net profit c/d	1,30,000			1,10,000	,, Other Income	7,750	—	—	7,750
					,, Income from subsidiary Company	2,250		2,250	—
					,, Loss c/f		20,000		
Rs.	3,30,000	1,20,000	2,250	4,27,750	Rs.	3,30,000	1 20,000	2,250	4 27,750
To Balance b/d		80,000		80,000	By Balance b/d (less dividend for 1976)	1,20,000			1,20,000
,, Profit & loss account		20,000		20,000	By Net profit as per Profit & Loss account	1,30,000			1,30,000
,, S & Co revenue loss	15,000				By Cost of control		60,000		60,000
,, Balance c/d	2,35,000			2,35,000	,, Minority interest		25,000		25,000
					H and Co revenue loss (for consolidation purposes)		15,000		
Rs.	2,50,000	1,00,000		3,35,000	Rs.	2,50,000	1,00,000		3,35,000

Assets	*H & Co Ltd* Rs	*S & Co Ltd* Rs.
Current assets	4,89,250	1,65,000
Fixed assets	4,30,000	95,000
Share and interest in S & Co Ltd	1,00,750	—
Goodwill	1,00,000	20,000
	11,20,000	2,80,000

You are required to prepare consolidated revenue account, consolidated appropriation of profits account and consolidated balance sheet of the two companies.

(For Consolidated Profit and Loss Account, see page HCA-52)

CONSOLIDATED BALANCE SHEET OF
H AND CO LTD AND ITS SUBSIDIARY *S* & CO LTD
as on 31st December, 1977

Liabilities		Rs.	*Assets*	Rs	Rs.
Share capital :					
50,000 Equity shares of Rs. 10 each fully paid		5,00,000	Goodwill	1,20,000	
			Less : Capital reserve	40,000	80,000
Reserves and surplus :					
Reserves		1,50,000	Fixed assets at cost		
Profit and loss account		2,35,000	*Less* : Depreciation		
Secured loans :			*H* & Co	4,30,000	
Debentures	Rs. 1,00,000		*S* & Co	95,000	5,25,000
Less : Inter-Co holding	50,000	50,000			
			Current assets		
Unsecured loans :			H & Co	4,89,250	
Long-term loan (*H* and Co)		70,000	S & Co	1,65,000	6,54,250
Current liabilities and provisions :					
Current liabilities *H* & Co	1,50,000				
S & Co	80,000				
	2,30,000				
Less : Inter-Co owing	750	2,29,250			
Minority interest		25,000			
Rs.		12,59,250	Rs		12,59,250

TUTORIAL NOTES

(1) Cost of Control or Capital reserve amount

		Rs.
paid for shares		50,000
Paid-up value of shares	1,50,000	
Less : Capital loss (75% of Rs. 80,000)	60,000	90,000
Capital Reserve		40,000

(2) Minority intesest

Share capital (½)		50,000
Less : Share of loss : capital	20,000	
revenue	5,000	25,000
		25,000

(3) Of the total amount, Rs. 1,00,750 shown as "Share and interest in *S* & Co Ltd" Rs. 750 is interest for 3 months on Rs 50,000 debentures from 1-10-1977 to 31-11-1977 and the balance is shares and debentures equally. Rs. 750 is adjusted against current liabilities, since it must have been included in the current liabilities of *S* & Co Ltd.

Consolidation when there is more than one subsidiary

When there is more than one subsidiary, the investment account of the holding company shows more than one investment in the balance sheet. So in order to eliminate each investment and the share capital of the subsidiary, it will be necesary to open a separate cost of control account and minority interest account for each of the subsidiaries. The procedure is illustrated below :

Illustration 27.

As on 30th June 1975, the balance sheets of three companies owed the following position :

FIG LTD

	Rs.	Rs.		Rs.
Share capital Authorised, issued and fully paid (Rs. 10 each)		2,00,000	Fixed Assets :	
			Land and buildings	40,000
			Plant and machinery	80,000
Capital reserve		20,000	Investments :	
Revenue reserve		60,000	Shares in Run Ltd at cost	1,15,000
Current liabilities :			Shares in Trot Ltd at cost	70,000
			Current assets :	
Creditors	40,000		Stock on hand	57,000
Provision for taxes	50,000		Sundry debtors	83,000
Proposed dividends	1,00,000	1,90,000	Balance at bank	25,000
	Rs.	4,70,000	Rs.	4,70,000

RUN LTD

		Rs.			Rs.
Share capital (Rs. 10 each) fully paid		80,000	Fixed assets :		
Capital reserve		40,000	Land and buildings		1,00,000
revenue reserve		42,000	Plant and machinery		35,000
					1,35,000
Current liabilities :			Current assets :		
Creditors	40,000		Stock	65,000	
Proposed dividend	80,000		Debtors	40,000	
Provision for tax	18,000	1,38,000	Balance at bank	60,000	1,65,000
	Rs.	3,00,000		Rs	3,00,000

TROT LTD

		Rs.			Rs.
Share capital (Rs 10 each)		1,00,000	Fixed assets .		
Capital reserve		—	Land and buildings		65,000
Revenue reserve		32,000	Plant and machinery		25,000
					90,000
Current liabilities .			Current assets ·		
creditors	23,000		Stock on hand	60,000	
Proposed dividends	10,000		Debtors	40,000	
Provision for tax	35,000	68,000	Bank balance	10,000	1,10,000
	Rs.	2,00,000		Rs.	2,00,000

You are also given the following information :

1. Fig Ltd acquired 5,000 shares in Run Ltd in 1970, when the balance on capital reserve had been Rs. 20,000 and on revenue reserve Rs 16,000. A further 1,000 shares were purchased in 1972 when the balance on capital reserve and revenue reserve had been Rs. 40,000 and Rs. 24,000 respectively.

2. Fig Ltd had purchased 7500 shares in Trot Ltd in 1971 when there had been adverse balance on revenue reserve Rs. 6,000.

3. The proposed dividends from subsidiary companies have been included in the figure for debtors in the accounts of the parent company.

You are required to prepare the consolidated balance sheet of Fig Ltd and its subsidiaries as on 30th June 1975, together with your consolidation schedules.

[Adopted from Professional Examination I (England)]

Solution :

Consolidation Schedules

(1) SHARE CAPITAL—TROT LTD

Minority interest (1/)4	Rs. 25,000	Balance	Rs. 1,00,000
Cost of control (3/4)	75,000		
	Rs. 1,00,000		Rs. 1,00,000

(2) REVENUE RESERVE—TROT LTD

Minority (1/4×42,000)	Rs. 10,500	Balance	Rs. 32,000
Balance to Fig Ltd		Proposed dividends	10,000
Revenue reserve		Cost of control A/c	
3/4×(32,000+10,000+6,000)=	36,000	—share in pre-acquisition loss 3/4×6,000	4,500
	Rs. 46,500		Rs. 46,500

(3) COST OF CONTROl (FIG IN TROT)

Investment account (Cost of 7,500 shares)	Rs. 70,000	Share capital	Rs. 75,000
Trot—pre-acquisition loss	4,500		
Balance transfersed to Capital reserve	500		
	Rs. 75,000		Rs. 75,000

(4) MINORITY INTEREST—TROT LTD

Balance c/f	Rs. 35,500	Share capital	Rs. 25,000
		Revenue reserve	10,500
	Rs. 35,500		Rs. 35,500

(5) SHARE CAPITAL—RUN LTD

Minority (1/4)	Rs. 20,000	Balance	Rs. 80,000
Cost of control balance	60,000		
	Rs. 80,000		Rs. 80,000

(6) CAPITAL RESERVE—RUN LTD

Minority interest (1/4)	Rs. 10,000	Balance	Rs. 40,000
Cost of control 5/8 × 20,000	12,500		
Cost of control 1/8×40,000	5,000		
Fig Ltd	12,500		
	Rs. 40,000		Rs. 40,000

(7) REVENUE RESERVE—RUN LTD

Minority interest (1/4)	Rs. 30,500	Balance	Rs. 42,000
Cost of Control 5/8 × 16,000	10,000	Proposed dividends	80,000
Cost of control 1/8 × 24,000	3,000		
Fig revenue reserve 5/8 (42,000 + 80,000 − 16,000)	66,250		
1/8 (42,000 + 80,000 − 24,000)	12,250		
	Rs. 1,22,000		Rs. 1,22,000

(8) COST OF CONTROL (FIG IN RUN)

Investment account (Cost of 6,000 shares)	Rs. 1,15,000	Share capital		Rs. 60,000
		Pre-acquisition profits		
		(i) Pertaining to 5,000 shares		
		Capital reserve	12,500	
		Revenue reserve	10,000	
				22,500
		(ii) Pertaining to 1,000 shares		
		Capital revenue	5,000	
		Revenue reserve	3,000	
				8,000
		Balance transferred to goodwill		24,500
	Rs. 1,15,000			Rs. 1,15,000

(9) MINORITY INTEREST—RUN LTD

Balance c/f	Rs. 60,500	Share capital	Rs. 20,000
		Capital reserve	10,000
		Revenue reserve	30,500
	Rs. 60,500		Rs. 60,500

(10) CAPITAL RESERVE—FIG LTD

Balance c/f	Rs. 32,500	Balance	Rs. 20,000
		Run Ltd—Capital reserve	12,500
	Rs. 32,500		Rs. 32,500

(11) REVENUE RESERVE—FIG LTD

Debtors Fig Ltd—proposed dividends from subsidiary	Rs. 67,500	Balance		Rs. 60,000
Balance c/f	1,07,000	Revenue reserves of subsidiaries		
		Run Ltd	78,500	
		Trot Ltd	36,000	
				1,14,500
	Rs. 1,74,500			Rs. 1,74,500

CONSOLIDATED BALANCE SHEET OF FIG LTD AND ITS SUBSIDIARIES RUN LTD AND TROT LTD

As on June 30, 1975.

		Rs.			Rs.
Share capital (Rs. 10 each fully paid)		2,00,000	Fixed assets :		
Reserves :			Land and building :		
Capital reserve	32,500		Fig	40,000	
Add :			Run	1,00,000	
Capital reserve (Trot) arising on consolidation	500		Trot	65,000	2,05,000
	33,000		Plant and machinery :		
Less : Goodwill (Run) arising on consolidation	24,500	8,500	Fig	80,000	
Revenue reserve		1,07,000	Run	35,000	
Current liabilities :			Trot	25,000	1,40,000
Creditors : Fig	40,000		Current assets :		
Run	40,000		Stock on hand :		
Trot	23,000	1,03,000	Fig	57,000	
Provision for taxes :			Run	65,000	
Fig	50,000		Trot	60,000	1,82,000
Run	18,000		Debtors :		
Trot	35,000	1,03,000	Fig	83,000	
Proposed dividends of Fig Ltd		1,00,000	Run	40,000	
interest			Trot	40,000	
Run Ltd	60,500			1,63,000	
Trot Ltd	35,500	96,000	*Less* : Dividends from subsidiaries	67,500	95,500
			Bank balance:		
			Fig	25,000	
			Run	60,000	
			Trot	10,000	95,000
		Rs. 7,17,500			Rs. 7,17,500

CONSOLIDATION IN THE CASE OF A VERTICAL GROUP

Holding companies may sometimes exercise their control indirectly. This happens in the case of sub-subsidiaries. A holding company has a direct subsidiary and that subsidiary has a controlling interest in another company. The latter is called a sub-subsidiary. This is a case of vertical group and is also referred to as a case of sub-subsidiary companies. As an Example *H* Ltd owns 80 per cent of the share capital of *X* Ltd and *X* Ltd owns 70 per cent of the share capital of *Y* Ltd. Here the control of *H* Ltd over *Y* Ltd is indirect and is to the extent of $8/10 \times 7/10 = 56\%$. Here *X* Ltd is the subsidiary and *Y* Ltd is the sub-subsidiary. In another case *H* Ltd may own 80% of the shares capital in *X* Ltd and *X* Ltd may own 60% of the share capital in *Y* Ltd. In this case the eventual ownership of the holding company is $8/10 \times 6/10 = 48\%$ only 1, which is *less* than 50%. But according to the provisions of Companies Act, 1956, both *X* Ltd and *Y* Ltd are the subsidiaries of *H* Ltd and therefore consolidated accounts will have to be prepared taking *Y* Ltd. also into account. In some cases control in *Y* Ltd is achieved by ***both H*** Ltd and *X* Ltd owning the share capital.

In a problem involving the consolidation of a vertical group, the tudent is advised first to pre-consolidate the sub-subsidiary with the ubsidiary and then consolidate the holding company with its subidiaries. In the above example *Y* Ltd must be consolidated with *X* Ltd first, so that the latter may be credited with the proper amount of rofit due from *Y* Ltd. In its turn *X* Ltd will pass on the proper amount o its holding company *H* Ltd. In this manner the process of consoliation will be completed without mistakes and confusion. An illustration s given to explain the procedure involved in this case.

llustration 28

The balance sheets of three companies showed the following ositions as on 31st December 1976 :

GRIP LTD

		Rs.			Rs.
[illegible]		[illegible]	Fixed assets :		
[illegible]		[illegible]	Land and buildings		1,50,000
[illegible]		[illegible]	Fixtures		90,000
[illegible]					2,40,000
Creditors	70,000		Investments :		
Provisions for tax	70,000		Shares in Hold Ltd at cost		1,25,000
Proposed dividend	1,00,000		Current assets :		
		2,40,000	Stock on hand	52,000	
			Debtors	72,000	
			Balance at bank	1,31,000	
					2,55,000
		Rs. 6,20,000			Rs. 6,20,000

HOLD LTD

		Rs.			Rs.
Share capital :			Fixed assets :		
Authorised, issued and fully paid in ordinary shares of Rs. 10 each		1,00,000	Land & buildings		50,000
			Fixtures		40,000
Capital reserve		—			90,000
Revenue reserve		64,000	Investment :		
			Shares in Valise Ltd at cost		1,60,000
Current liabilities :			Current assets :		
Creditors	90,000		Stocks on hand	30,000	
Provision for taxes	66,000		Debtors	60,000	
Proposed dividend	50,000	2,06,000	Bank balance	30,000	
					1,20,000
		Rs. 3,70,000			Rs. 3,70,000

VALISE LTD

		Rs.			Rs.
Share capital :			Fixed assets :		
Authorised issued and fully paid ordinary shares of Rs 10 each		1,50,000	Land and buildings		75,000
			Fixtures		36,000
Capital reserve		30,000			1,11,000
Revenue reserve		36,000	Investments :		
Current liabilities			Current assets :		
Creditors	20,000		Stock on hand	64,000	
Provision for taxes	34,000		Debtors	46,000	
Proposed dividend	30,000		Bank balance	79,000	
		84,000			1,89,000
		Rs. 3,00,000			Rs. 3,00,000

You also obtain the following information :

1. Hold Ltd acquired 12,000 shares in Valise Ltd in 1973, when the balance on capital reserve had been Rs. 20,000 and on revenue reserve Rs. 22,000.

2. Grip Ltd purchased 7,500 shares in Hold Ltd in 1974, when the balance on the consolidated revenue reserve had been Rs. 25,000. The balance on capital reserve in Valise Ltd at that time was Rs. 30,000.

3. Grip Ltd purchased further 1,500 shares in Hold Ltd in 1975, when the balance on the consolidated revenue reserve had been Rs. 40,000.

4. Proposed dividends from subsidiary companies have been included in the figure of debtors in the accounts of the parent companies. You are required to prepare the consolidated balance sheet of Grip Ltd and its subsidiaries as on 31st December 1976, together with your consolidation schedule. [Professional Examination (1) England]

Solution :

Pre-consolidating Valise Ltd with Hold Ltd.

Consolidation Schedules

(1) COST OF CONTROL

	Rs.		Rs.
Investment account :		Share capital A/c	1,20,000
Shares in Valise Ltd at cost	1,60,000	Capital reserve (4/5)	16,000
		Revenue reserve (4/5)	17,600
		Balance transferred to goodwill	6,400
	Rs. 1,60,000		Rs 1,60,000

(2) MINORITY INTEREST

Balance carried forward	Rs. 43,200	Share capital in Valise Ltd	Rs. 30,000
		Capital reserve (1/5)	6,000
		Revenue reserve (1/5)	7,200
	Rs. 43,200		Rs. 43,200

(3) CAPITAL RESERVE

Minority Interest (1/5)	Rs. 6,000	Balance	Rs. 30,000
Cost of control A/c (4/5) × 20,000	16,000		
Hold Ltd (4/5) × 10,000	8,000		
	Rs. 30,000		Rs. 30,000

(4) REVENUE RESERVE

Minority interest (1/5)		Rs. 7,200	Balance	Rs. 36,000
Cost of control a/c 4/5	22,000	17,600		
Hold Ltd 4/5 of	14,000	11,200		
		Rs. 36,000		Rs. 36,000

(5) BALANCE SHEET OF HOLD LTD AND VALISE LTD
PRE-CONSOLIDATED

		Rs			Rs.
Share capital:			Fixed assets:		
Ordinary shares of Rs. 10 each		1,00,000	Goodwill		6,400
Capital reserve (Valise Ltd)		8,000	Land and buildings:		
Revenue reserve:			Hold Ltd	50,000	
Hold Ltd	64,000		Valise Ltd	75,000	
Valise Ltd	11,200	75,200			1,25,000
Current liabilities:			Fixtures:		
Creditors			Hold Ltd	40,000	
Hold Ltd	90,000		Valise Ltd	36,000	
Valise Ltd	20,000				76,000
		1,10,000	Current assets:		
Provision for taxes:			Stock		
Hold Ltd	66,000		Hold Ltd	30,000	
Valise Ltd	34,000		Valise Ltd	64,000	
		1,00,000			94,000
Proposed dividends:			Debtors:		
Hold Ltd	50,000		Hold Ltd	60,000	
Valise Ltd	30,000		Valise Ltd	46,000	
		80,000			1,06,000
Minority interest	43,200	43,200	Bank:		
			Hold Ltd	30,000	
			Valise Ltd	79,000	
					1,09,000
		Rs. 5,16,400			Rs. 5,16,400

Note. Inter-company dividends are eliminated in the final consolidation.

The Final Consolidation

At this stage we can incorporate the balance sheet of Grip Ltd and so obtain the consolidated balance sheet of the group. Before that is done, as a preliminary, the necessary consolidation schedules are shown below:

Consolidation Shedules

(6) COST OF CONTROL ACCOUNT

	Rs.		Rs.
Investment account		Share capital	75,000
Shares in Hold Ltd at cost	1,25,000	Capital reserve (3/4×Rs. 8,000)	6,000
		Revenue reserve (3/4×Rs. 25,000)	18,750
		Share capital	15,000
		Capital reserve (3/20×Rs. 8,000)	1,200
		Revenue reserve (3/20×Rs. 40,000)	6,000
		Goodwill (balancing figure)	3,050
	Rs. 1,25,000		Rs. 1,25,000

(7) CAPITAL RESERVE—HOLD LTD

Cost of control	Rs. 6,000	Balance	Rs. 8,000
Cost of control	1,200		
Minority interest	800		
	Rs. 8,000		Rs. 8,000

You also obtain the following information :

1. Hold Ltd acquired 12,000 shares in Valise Ltd in 1973, when the balance on capital reserve had been Rs. 20,000 and on revenue reserve Rs. 22,000.

2. Grip Ltd purchased 7,500 shares in Hold Ltd in 1974, when the balance on the consolidated revenue reserve had been Rs. 25,000 The balance on capital reserve in Valise Ltd at that time was Rs. 30,000

3. Grip Ltd purchased further 1,500 shares in Hold Ltd in 1975 when the balance on the consolidated revenue reserve had been Rs 40,000.

4. Proposed dividends from subsidiary companies have been included in the figure of debtors in the accounts of the parent companies You are required to prepare the consolidated balance sheet of Grip Ltd and its subsidiaries as on 31st December 1976, together with your consolidation schedule. [Professional Examination (1) England

Solution :

Pre-consolidating Valise Ltd with Hold Ltd.

Consolidation Schedules

(1) COST OF CONTROL

	Rs.		Rs.
Investment account :		Share capital A/c	1,20,000
Shares in Valise Ltd at cost	1,60,000	Capital reserve (4/5)	16,000
		Revenue reserve (4/5)	17,600
		Balance transferred to goodwill	6,400
	Rs. 1,60,000		Rs 1,60,000

(2) MINORITY INTEREST

Balance carried forward	Rs. 43,200	Share capital in Valise Ltd	Rs. 30,000
		Capital reserve (1/5)	6,000
		Revenue reserve (1/5)	7,200
	Rs. 43,200		Rs. 43,200

(3) CAPITAL RESERVE

Minority Interest (1/5)	Rs. 6,000	Balance	Rs. 30,000
Cost of control A/c (4/5) × 20,000	16,000		
Hold Ltd (4/5) × 10,000	8,000		
	Rs. 30,000		Rs. 30,000

(4) REVENUE RESERVE

Minority interest (1/5)	Rs. 7,200	Balance	Rs. 36,000
Cost of control a/c 4/5 22,000	17,600		
Hold Ltd 4/5 of 14,000	11,200		
	Rs. 36,000		Rs. 36,000

(5) BALANCE SHEET OF HOLD LTD AND VALISE LTD
PRE-CONSOLIDATED

		Rs			Rs.
Share capital :			Fixed assets :		
Ordinary shares of Rs. 10 each		1,00,000	Goodwill		6,400
Capital reserve (Valise Ltd)		8,000	Land and buildings :		
Revenue reserve :			Hold Ltd	50,000	
Hold Ltd	64,000		Valise Ltd	75,000	
Valise Ltd	11,200	75,200			1,25,000
			Fixtures :		
Current liabilities :			Hold Ltd	40,000	
Creditors			Valise Ltd	36,000	
Hold Ltd	90,000				76,000
Valise Ltd	20,000		Current assets :		
		1,10,000	Stock		
Provision for taxes :			Hold Ltd	30,000	
Hold Ltd	66,000		Valise Ltd	64,000	
Valise Ltd	34,000				94,000
		1,00,000	Debtors :		
Proposed dividends :			Hold Ltd	60,000	
Hold Ltd	50,000		Valise Ltd	46,000	
Valise Ltd	30,000				1,06,000
		80,000	Bank		
Minority interest	43,200	43,200	Hold Ltd	30,000	
			Valise Ltd	79,000	
					1,09,000
	Rs.	5,16,400		Rs.	5,16,400

Note. Inter-company dividends are eliminated in the final consolidation.

The Final Consolidation

At this stage we can incorporate the balance sheet of Grip Ltd and so obtain the consolidated balance sheet of the group. Before that is done, as a preliminary, the necessary consolidation schedules are shown below :

Consolidation Shedules

(6) COST OF CONTROL ACCOUNT

	Rs.		Rs.
Investment account		Share capital	75,000
Shares in Hold Ltd at cost	1,25,000	Capital reserve (3/4×Rs. 8,000)	6,000
		Revenue reserve (3/4×Rs. 25,000)	18,750
		Share capital	15,000
		Capital reserve (3/20×Rs. 8,000)	1,200
		Revenue reserve (3/20×Rs. 40 000)	6,000
		Goodwill (balancing figure)	3,050
Rs.	1,25,000	Rs.	1,25,000

(7) CAPITAL RESERVE—HOLD LTD

Cost of control	Rs. 6,000	Balance	Rs. 8,000
Cost of control	1,200		
Minority interest	800		
Rs	8,000		Rs. 8,000

You also obtain the following information :

1. Hold Ltd acquired 12,000 shares in Valise Ltd in 1973, when the balance on capital reserve had been Rs. 20,000 and on revenue reserve Rs. 22,000.

2. Grip Ltd purchased 7,500 shares in Hold Ltd in 1974, when the balance on the consolidated revenue reserve had been Rs. 25,000. The balance on capital reserve in Valise Ltd at that time was Rs. 30,000.

3. Grip Ltd purchased further 1,500 shares in Hold Ltd in 1975, when the balance on the consolidated revenue reserve had been Rs. 40,000.

4. Proposed dividends from subsidiary companies have been included in the figure of debtors in the accounts of the parent companies. You are required to prepare the consolidated balance sheet of Grip Ltd and its subsidiaries as on 31st December 1976, together with your consolidation schedule. **[Professional Examination (1) England]**

Solution :

Pre-consolidating Valise Ltd with Hold Ltd.

Consolidation Schedules

(1) COST OF CONTROL

	Rs.		Rs.
Investment account :		Share capital A/c	1,20,000
Shares in Valise Ltd at cost	1,60,000	Capital reserve (4/5)	16,000
		Revenue reserve (4/5)	17,600
		Balance transferred to goodwill	6,400
	Rs. 1,60,000		Rs 1,60,000

(2) MINORITY INTEREST

Balance carried forward	Rs. 43,200	Share capital in Valise Ltd	Rs. 30,000
		Capital reserve (1/5)	6,000
		Revenue reserve (1/5)	7,200
	Rs. 43,200		Rs. 43,200

(3) CAPITAL RESERVE

Minority Interest (1/5)	Rs. 6,000	Balance	Rs. 30,000
Cost of control A/c (4/5) × 20,000	16,000		
Hold Ltd (4/5) × 10,000	8,000		
	Rs. 30,000		Rs. 30,000

(4) REVENUE RESERVE

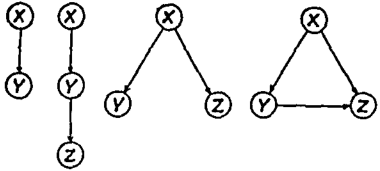
Minority interest (1/5)	Rs. 7,200	Balance	Rs. 36,000
Cost of control a/c 4/5 22,000	17,600		
Hold Ltd 4/5 of 14,000	11,200		
	Rs. 36,000		Rs. 36,000

Notes : 1. In the final consolidation Hold Ltd figures are as per the pre-consolidated balance sheet.

2. Inter-company dividends of Rs. 45,000 payable by Hold Ltd and Rs. 24,000 payable by Valise Ltd have been eliminated from the proposed dividends and debtors balances.

RECIPROCAL STOCK HOLDING NOT INVOLVING INTERCOMPANY PROFITS ON ASSET TRANSFERS

In the previous part the consolidated statement was prepared for the multi-level affiliations not involving reciprocal stockholding. In all the cases discussed so far the relationship primarily was of the form illustrated below :



In the discussion to follow in this part, a case has been taken to solve the problems in those cases where there is inter-company investments in shares. In all such cases the main problem is :

(*a*) Calculations of shares of majority shareholdings (*i.e.*, holding company) and minority shareholdings (*i.e.*, minority interest) in profits of companies having inter-company investments.

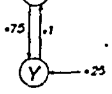
(*b*) Calculation of shares of majority shareholdings (*i.e.*, holding company) and minority shareholdings (*i.e.*, minority interest) in the unrealised profits of a company when there are inter-company transactions of sale of goods at a margin of profit.

Under this heading cases not involving profit on inter-company transfer have been discussed. The case under (*b*) has been discussed under the next heading on page HCA-67

Case 1. Bilateral stockholding involving parent company

Illustration 29

Consider the following affiliation diagram :



If the profits of X are Rs. 10,000 and that of Y are Rs. 5,000, divide the profits between majority and minority holdings.

Solution :

In order to solve the above problem let us assume that the total profits of X on a consolidated basis be x, and total profits of Y on a consolidated basis be y. Thus—

$$x = \text{Rs. } 10{,}000 + \cdot 75y$$
$$y = \text{Rs. } 5{,}000 + \cdot 1x$$

The problem may now be solved as follows :

$$x = \text{Rs. } 10{,}000 + \cdot 75 \,(\text{Rs. } 5{,}000 + \cdot 1x)$$
$$[\because \; y = \text{Rs. } 5{,}000 + \cdot 1x]$$

$$x = \text{Rs. } 10{,}000 + \frac{3}{4}\left(\text{Rs. } 5{,}000 + \frac{x}{10}\right)$$

$$\text{or} \quad x = \text{Rs. } 10{,}000 + \frac{15{,}000}{4} + \frac{3x}{40}$$

$$\text{or} \quad 40x = \text{Rs. } 4{,}00{,}000 + 1{,}50{,}000 + 3x$$
$$\text{or} \quad 37x = \text{Rs. } 5{,}50{,}000$$

$$\therefore \quad x = \frac{\text{Rs. } 5{,}50{,}000}{37} = \text{Rs. } 14{,}865 \text{ (approx.)}$$

$$\text{Again } y = \text{Rs. } 5{,}000 + \cdot 1x$$
$$\text{or} \quad = \text{Rs. } 5{,}000 + \cdot 1 \times \text{Rs. } 14{,}865$$
$$= \text{Rs. } 5{,}000 + 1486 \cdot 5$$
$$= \text{Rs. } 6{,}486 \cdot 5 \text{ or Rs. } 6{,}487 \text{ (approx.)}$$

After having calculated the total profits of X and Y companies on the consolidated basis, it becomes essential to calculate the profits of the two companies left after giving and taking, *i.e.*, total profits of the holding company and share of minority interest after inter-company claims. This can be done by making the following table of transfers.

(*a*) *Calculation of profit after inter-company claims* :

	X	Y
Profits as per balance sheet (given)	Rs. 10,000	5,000
Add : Profits received from the other company	*4,865*[1]	*1,487*[1]
Total profit as per calculations	14,865	6,487
Less : Profits given to other companies	*1,487*[2]	*4,865*[2]
Profits left after inter-company claims (to be shown in consolidated statement)	13,378	1,622[3]

This profit belongs to minority interest

1. The figure is arrived at by deducting the profit as per balance sheet from the total profits as per calculations.

2. The profit received by X must have been given by Y and profits received by Y must have been given by X. Hence the amount has been deducted.

3. The profit left in the subsidiary company after receiving and giving from and to holding company must belong to minority shareholders.

(b) *Verification of total profit* :

Profits of *X* Ltd.	Rs 13,378
Minority interest in profits	1,622
Total Profits	Rs. 15,000

The same principle has been used to work out the following full problems.

Illustration 30

Following are the balance sheets of the *H* Ltd and *S* Ltd. You are required to prepare a consolidated statement.

BALANCE SHEETS

	H Rs.	*S* Rs.		*H* Rs.	*S* Rs.
Share capital	1,00,000	40,000	Sundry assets	79,000	44,000
Post-acquisition profits	10,000	5,000	Shares in *S* Ltd (30,000)	37,000	—
Creditors	6,000	4,000	Shares in *H* Ltd (10,000)	—	13,000
Bills payable (all issued to *H* Ltd)	—	8,000			
Rs.	1,16,000	57,000	Rs.	1,16,000	57,000

Sundry assets of *H* Ltd included bills receivable from *S* Ltd Rs. 3,000. There was a contingent liability of *H* Ltd on account of bills discounted Rs. 7,000.

Solution :

CONSOLIDATED STATEMENT

		Rs.		Rs.	Rs.
Share capital		90,000	Goodwill :		
Creditors		10,000	On shares of *S* Ltd	7,000	
Bills payable		5,000	On shares of *H* Ltd	3,000	
Minority interest :					10,000
Shares	10,000				
Profits	1,622		Sundry assets		1,20,000
		11,622			
Profits of *H* Ltd		13,378			
	Rs.	1,30,000		Rs.	1,30,000

There is a contingent liability on account of bills discounted Rs. 2,000.

TUTORIAL NOTES

1. Common transactions of bills payable have been deleted to the extent of Rs. 3,000 because only to that extent they were appearing in the balance sheet.
2. [illegible] Rs. [illegible] have been [illegible] was no equi- [illegible]
3. [illegible] cause rest [illegible] ability.
4. [illegible] deducted [illegible] vestment
5. [illegible] share in [illegible] d in the [illegible]

If the profits of X are Rs. 10,000 and that of Y are Rs. 5,000, divide the profits between majority and minority holdings.

Solution :

In order to solve the above problem let us assume that the total profits of X on a consolidated basis be x, and total profits of Y on a consolidated basis be y. Thus—

$$x = \text{Rs. } 10{,}000 + \cdot 75y$$
$$y = \text{Rs. } 5{,}000 + \cdot 1x$$

The problem may now be solved as follows :

$$x = \text{Rs. } 10{,}000 + \cdot 75\ (\text{Rs. } 5{,}000 + \cdot 1x)$$
$$[\because\ y = \text{Rs. } 5{,}000 + \cdot 1x]$$
$$x = \text{Rs. } 10{,}000 + \frac{3}{4}\left(\text{Rs. } 5{,}000 + \frac{x}{10}\right)$$

or $\quad x = \text{Rs. } 10{,}000 + \frac{15{,}000}{4} + \frac{3x}{40}$

or $\; 40x = \text{Rs. } 4{,}00{,}000 + 1{,}50{,}000 + 3x$

or $\; 37x = \text{Rs. } 5{,}50{,}000$

$\therefore \quad x = \frac{\text{Rs. } 5{,}50{,}000}{37} = \text{Rs. } 14{,}865$ (approx.)

Again $y = \text{Rs. } 5{,}000 + \cdot 1x$

or $\quad = \text{Rs. } 5{,}000 + \cdot 1 \times \text{Rs. } 14{,}865$

$\quad = \text{Rs. } 5{,}000 + 1486 \cdot 5$

$\quad = \text{Rs. } 6{,}486 \cdot 5$ or Rs. 6,487 (approx.)

After having calculated the total profits of X and Y companies on the consolidated basis, it becomes essential to calculate the profits of the two companies left after giving and taking, *i.e.*, total profits of the holding company and share of minority interest after inter-company claims. This can be done by making the following table of transfers.

(*a*) *Calculation of profit after inter-company claims* :

		X	Y
Profits as per balance sheet (given)	Rs.	10,000	5,000
Add : Profits received from the other company		*4,865*[1]	*1,487*[1]
Total profit as per calculations		14,865	6,487
Less : Profits given to other companies		*1,487*[2]	*4,865*[2]
Profits left after inter-company claims (to be shown in consolidated statement)		13,378	1,622[3]

This profit belongs to minority interest

1. The figure is arrived at by deducting the profit as per balance sheet from the total profits as per calculations.

2. The profit received by X must have been given by Y and profits received by Y must have been given by X. Hence the amount has been deducted.

3. The profit left in the subsidiary company after receiving and giving from and to holding company must belong to minority shareholders.

(b) *Verification of total profit* :

Profits of *X* Ltd.	Rs 13,378
Minority interest in profits	1,622
Total Profits	Rs. 15,000

The same principle has been used to work out the following full problems.

Illustration 30

Following are the balance sheets of the *H* Ltd and *S* Ltd. You are required to prepare a consolidated statement.

BALANCE SHEETS

	H Rs.	*S* Rs.		*H* Rs.	*S* Rs.
Share capital	1,00,000	40,000	Sundry assets	79,000	44,000
Post-acquisition profits	10,000	5,000	Shares in *S* Ltd (30,000)	37,000	—
Creditors	6,000	4,000	Shares in *H* Ltd (10,000)	—	13,000
Bills payable (all issued to *H* Ltd)	—	8,000			
Rs.	1,16,000	57,000	Rs.	1,16,000	57,000

Sundry assets of *H* Ltd included bills receivable from *S* Ltd Rs. 3,000. There was a contingent liability of *H* Ltd on account of bills discounted Rs. 7,000.

Solution :

CONSOLIDATED STATEMENT

		Rs.		Rs.	Rs.
Share capital		90,000	Goodwill :		
Creditors		10,000	On shares of *S* Ltd	7,000	
Bills payable		5,000	On shares of *H* Ltd	3,000	
Minority interest :					10,000
Shares	10,000				
Profits	1,622		Sundry assets		1,20,000
		11,622			
Profits of *H* Ltd		13,378			
	Rs.	1,30,000		Rs.	1,30,000

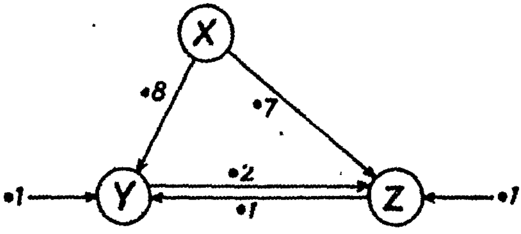
There is a contingent liability on account of bills discounted Rs. 2,000.

TUTORIAL NOTES

1. Common transactions of bills payable have been deleted to the extent of Rs. 3,000 because only to that extent they were appearing in the balance sheet.
2. Bills payable, although issued to *H* Ltd, Rs. 5,000 have been shown in the consolidated statement because there was no equivalent asset to avoid it.
3. [illegible] rest [illegible]
4. [illegible] ted [illegible] ent.
5. Calculation of minority interest and holding company's share in profits has been done as per the technique explained in the preceding illustration.

Case 2. Bilateral stockholdings not involving parent company

In this case company X directly controls both company Y and company Z, companies Y and Z also bilaterally affiliated. It has been assumed that profits of X, Y and Z are Rs. 50,000, Rs. 20,000 and Rs. 10,000 respectively. The affiliation diagram is as under :



The above diagram means that X controls ·7 shares of Z Ltd and ·8 shares of Y Ltd. Y controls ·2 of Z and Z controls ·1 of Y. Thus minority holdings of both Y and Z are ·1 each. The determination of X's share of profits in Y and Z for the consolidation purposes and minority interest in Y's profit and Z's profit is done with the help of the following formulation :

Y=net income of Y Ltd on a consolidated basis
Z=net income of Z Ltd on a consolidated basis

$$Y = \text{Rs. } 20{,}000 + \cdot 2Z$$
$$Z = \text{Rs. } 10{,}000 + \cdot 1Y$$
$$Y = \text{Rs. } 20{,}000 + \cdot 2\,(\text{Rs. } 10{,}000 + \cdot 1\,Y)$$
$$Y = \text{Rs. } 20{,}000 + \text{Rs. } 2{,}000 + \cdot 02\,Y$$
$$\cdot 98Y = \text{Rs. } 22{,}000$$
$$Y = \text{Rs. } 22{,}448{\cdot}98$$
$$Z = \text{Rs. } 10{,}000 + \cdot 1\,(\text{Rs. } 22{,}448{\cdot}98)$$
$$Z = \text{Rs. } 10{,}000 + \text{Rs. } 2{,}244{\cdot}90$$
$$Z = \text{Rs. } 12{,}244{\cdot}90$$

Allocation of the net incomes of affiliated companies is as follows :

	Rs.	
Company X's net income	50,000·00	
80 per cent of company Y's consolidated basis net income (80% of Rs. 22,448·98)	17,959·18	
70 per cent of company Z's consolidated basis net income (70% of Rs. 12,244·90)	8,571·43	
Consolidated net income		Rs. 76,530·61
Minority interest in company Y : 10% of company Y's consolidated basis net income (10% of Rs. 22,448·98)		2,244·90
Minority interest in company Z : 10% of company Z's consolidated basis net income (10% of		

Rs. 12,244 90)	1,224·49
Total net income of the group	Rs. 80,000·00

INVOLVING INTER-COMPANY PROFIT ON ASSET TRANSFERS

Under this case it has been attempted to suggest the method of calculating unrealised profits on inter-company sale transactions particularly where there is interlocking of fund in the ownership of the company.

Illustration 31

X company owns 70% shares of *Z* and 90% shares of *Y* companies. *Y* company also owns 20% shares in *Z* and *Z* company owns 20% shares in *X* company. You are required to calculate unrealised profit for consolidated balance sheet purposes when *Z* company made a profit of Rs. 8,240 on inter-company sale transactions and which is still unconfirmed.

Solution :

Let x_1 = interest of company *X* in the unconfirmed profit on a consolidated basis.

y_1 = interest of company *Y* in the unconfirmed profit on a consolidated basis.

z_1 = interest of company *Z* in the unconfirmed profit on a consolidated basis.

The following equations may now be derived

$$x_1 = \frac{9}{10} y_1 + \frac{7}{10} z_1 \qquad \text{...I}$$

$$y_1 = \frac{2}{10} z_1 \qquad \text{...II}$$

$$z_1 = \text{Rs. } 8,240 + \frac{2}{10} x_1 \qquad \text{..III}$$

By taking L.C.M. the above three equations may now be written in

$$10y_1 - 2z_1 = 0 \qquad \text{..V}$$

$$10z_1 - 2x_1 = 82,400 \qquad \text{..VI}$$

By solving them we arrive at the following values of :

x_1 = Rs. 8,800

y_1 = Rs. 2,000

z_1 = Rs. 10,000

The unconfirmed profit (or unrealised profit) from consolidated point of view is :

$$\frac{80}{100} \times \text{Rs } 8,800 = \text{Rs. } 7,040$$

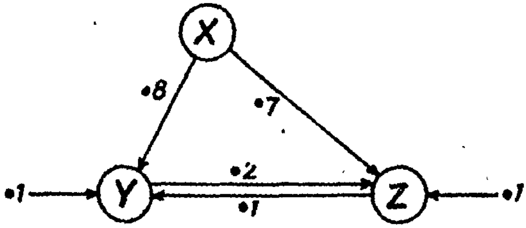
This is owing to the fact that consolidated balance sheet is made from the point of view of *X* and it is its share of profit out of its total interest in unrealised profit which is taken as unrealised profit for consolidation purpose. Since its 20% shares are held back by *Z*, therefore, unrealised position left with it is only 80%.

Minority interest in unrealised profit is as follows

Y company (10% of Rs. 2,000)	Rs. 200
Z company (10% of Rs. 10,000)	1,000
	Rs 1,200

Case 2. Bilateral stockholdings not involving parent company

In this case company X directly controls both company Y and company Z, companies Y and Z also bilaterally affiliated. It has been assumed that profits of X, Y and Z are Rs. 50,000, Rs. 20,000 and Rs. 10,000 respectively. The affiliation diagram is as under :



The above diagram means that X controls ·7 shares of Z Ltd and ·8 shares of Y Ltd. Y controls ·2 of Z and Z controls ·1 of Y. Thus minority holdings of both Y and Z are ·1 each. The determination of X's share of profits in Y and Z for the consolidation purposes and minority interest in Y's profit and Z's profit is done with the help of the following formulation :

Y=net income of Y Ltd on a consolidated basis
Z=net income of Z Ltd on a consolidated basis

$$Y = \text{Rs. } 20{,}000 + \cdot 2Z$$
$$Z = \text{Rs. } 10{,}000 + \cdot 1Y$$
$$Y = \text{Rs. } 20{,}000 + \cdot 2\,(\text{Rs. } 10{,}000 + \cdot 1\,Y)$$
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$$\cdot 98Y = \text{Rs. } 22{,}000$$
$$Y = \text{Rs. } 22{,}448\cdot 98$$
$$Z = \text{Rs. } 10{,}000 + \cdot 1\,(\text{Rs. } 22{,}448\cdot 98)$$
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Minority interest in company Z : 10% of company Z's consolidated basis net income (10% of		

Rs. 12,244 90)	1,224·49
Total net income of the group	Rs. 80,000·00

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Under this case it has been attempted to suggest the method of calculating unrealised profits on inter-company sale transactions particularly where there is interlocking of fund in the ownership of the company.

Illustration 31

X company owns 70% shares of *Z* and 90% shares of *Y* companies. *Y* company also owns 20% shares in *Z* and *Z* company owns 20% shares in *X* company. You are required to calculate unrealised profit for consolidated balance sheet purposes when *Z* company made a profit of Rs. 8,240 on inter-company sale transactions and which is still unconfirmed.

Solution :

Let x_1 = interest of company *X* in the unconfirmed profit on a consolidated basis.

y_1 = interest of company *Y* in the unconfirmed profit on a consolidated basis.

z_1 = interest of company *Z* in the unconfirmed profit on a consolidated basis.

The following equations may now be derived

$$x_1 = \frac{9}{10} y_1 + \frac{7}{10} z_1 \qquad \text{...I}$$

$$y_1 = \frac{2}{10} z_1 \qquad \text{...II}$$

$$z_1 = \text{Rs. } 8{,}240 + \frac{2}{10} x_1 \text{...III}$$

By taking L.C.M. the above three equations may now be written in

$$10y_1 - 2z_1 = 0 \qquad \text{...V}$$

$$10z_1 - 2x_1 = 82{,}400 \text{...VI}$$

By solving them we arrive at the following values of :

x_1 = Rs. 8,800

y_1 = Rs. 2,000

z_1 = Rs 10,000

The unconfirmed profit (or unrealised profit) from consolidated point of view is :

$$\frac{80}{100} \times \text{Rs. } 8{,}800 = \text{Rs. } 7{,}040$$

This is owing to the fact that consolidated balance sheet is made from the point of view of *X* and it is its share of profit out of its total interest in unrealised profit which is taken as unrealised profit for consolidation purpose. Since its 20% shares are held back by *Z*, therefore, unrealised position left with it is only 80%.

Minority interest in unrealised profit is as follows

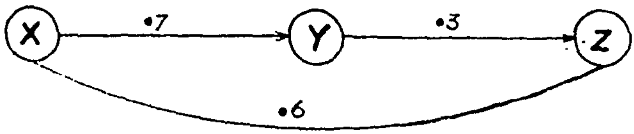
Y company (10% of Rs 2,000)	Rs. 200
Z company (10% of Rs. 10,000)	1,000
	Rs. 1,200

Thus, distribution of total profit is as under :

To the minority shareholders	Rs. 1,200
To the majority shareholders	7,040
	Rs. 8,240

DERIVED PROFIT

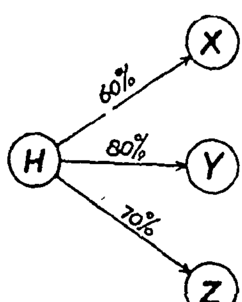
Under this heading it has been proposed to discuss the calculation of minority interest and majority interest under those cases where a subsidiary company further holds shares in another company which may be the subsidiary of the holding company or its own subsidiary company. The affiliation diagram of such companies may be of the following type :



In the above case *X* holds 70% equities of *Y* and 60% of *Z*. Thus *Y* and *Z* are subsidiaries of *X*. *Y* also holds 30% shares of *Z*. Thus, 70% profit of *Y* and 60% profit of *Z* will flow to *X*. Since 30% of *Z*'s holdings are again owned by *Y*, therefore, out of total profits of *Z* 30% will go to *Y*. This profit of *Y* (which is received by *Y* by virtue of its investment in *Z*) is called *derived profit* of *Y*. Out of this share again *X* will be entitled to 70% and the remaining will be going to its minority interest.

It is important to remember that the share of the holding company in its subsidiaries, the share of one subsidiary in another subsidiary is to be *always* divided into *pre- and post-acquisition profits*. Without considering this fact the calculation of cost of control for the group balance sheet purpose will go wrong. The whole problem may be put in a summarised way as follows :

The problem of derived profit arises only when one subsidiary company holds shares in another subsidiary company. If there are two or more subsidiary companies which are directly subsidiary to the holding company and which are not inter-connected by their investments in each other's ownership holdings there is no problem of derived profit. Thus in the following affiliation diagram there is no problem of derived profit :



When subsidiary companies are also inter-connected, the various calculations required for making a consolidated balance sheet may be put as follows :

Step 1 First calculate minority interest in the profit of each subsidiary company without taking into consideration the derived profit.

Step 2. Then calculate holding company's share in each subsidiary company's own profit, *i.e.*, without taking into consideration the derived profit. When calculating holding company's share in the profits of subsidiary company, the date of acquisition of share is very important because in each case the profit is to be divided into pre- and post-acquisition parts.

Step 3. Now calculate the share of one subsidiary company in another subsidiary company (called derived profit). This share again must be divided into pre- and post-acquisition parts.

Step 4. [illegible] *direct* [illegible] y care- [illegible] at all [illegible] The pre-acquisition profit is always a capital profit in the hands of receiving company and hence is *not available to the shareholders of the receiving company* Since, in these cases the receiving company is again a subsidiary company, therefore, its shareholders are of two categories, *i.e*, majority and minority But when the pre-acquisition profit is not at all available to the shareholders there is no question of making any distinction between minority and majority interests.

Step 5. The post-acquisition derived profit is again available to the shareholders of the receiving company Therefore, this profit must be divided into minority interest and majority interest.

Step 6. The majority interest in the derived profit, *i.e.*, holding company's share in the subsidiary company's derived profit, again must be derived into pre- and post-acquisition profits. This will be based on the date of purchase of shares by the holding company in the subsidiary company and also on the date of purchase of shares by one subsidiary company in another subsidiary company.

The whole procedure may be repeated in outline as under :

(*a*) calculate *minority interests in the own profit,*
(*b*) calculate holding company's share in each subsidiary company and divide it into pre- and post-acquisition profits,
(*c*) calculate derived profit and divide it into pre- and post-acquisition profits,
(*d*) do not divide the pre-acquisition derived profit,
(*e*) divide the post-acquisition derived profit into :
  (*i*) minority interest, and
  (*ii*) majority interest,
(*f*) divide the above majority interest in the derived profit again into :
  (*i*) pre-acquisition profit, and
  (*ii*) post-acquisition profit.
(*g*) Calculate (*i*) total minority interest by adding minority interest

of all subsidiary companies and minority interest in the derived profit ; (*ii*) total pre-acquisition profits. Do not forget to add total pre-acquisition profit in the derived profit ; and (*iii*) tota post-acquisition profit.

These principles have been explained by taking illustrations.

Illustration 32

X Ltd acquired 10% shareholdings in *Y* Ltd when the latter's profi and loss account balance was in debit of Rs. 600. Later, *H* Ltd acquire 80 per cent *of the shares in X* Ltd and on the same day acquired 60 pe cent of the shares in *Y* Ltd when the profit and loss account balances o those companies stood at a credit of Rs. 2,000 and a debit of Rs. 1,00 respectively. Show statement of how the present credit balances in th profit and loss of Rs. 3,000 and Rs. 2,400 for *X* Ltd and *Y* Ltd respectivel will be dealt with.

Solution :

In order to solve the above problem, a statement is prepared. Th first part of the statement states the information given in the question an the second part solves the problem.

STATEMENT SHOWING DIVISION OF PROFIT

Part 1. Information	*H*	*X*	*Y*
Control of *X* Ltd in *Y* Ltd		←	10% (600 Dr.
Control of *H* Ltd in *X* Ltd	←	80% (2,000 Cr.)	
Control of *H* Ltd in *Y* Ltd	←		60% (1,000 Dr.
Profit on the date of consolidation		(3,000 Cr.)	(2,400 Cr.

Part 2. Calculations			*H*	*X*	*Y*
Step 1. Minority interest				$\frac{20}{100}\times 3{,}000$ =[600 Cr.]	$\frac{30}{100}\times 2{,}4$ =[720 C
Step 2. Holding company's share (i) in *X* Ltd :	Pre	$\frac{80}{100}\times 2{,}000$	1600		
	Post	$\frac{80}{100}\times 1{,}000$	800		
(ii) in *Y* Ltd :	Pre	$\frac{60}{100}\times 1{,}000$ (Dr.)	−600		
	Post	$\frac{60}{100}\times 3{,}000$ (Cr.)	2,040		
Step 3. *X*'s share in *Y* Ltd :	Pre			$\frac{10}{100}\times 600$ Dr. = −60	
	Post			$\frac{10}{100}\times 3{,}000$Cr. =300	
Step 4. Minority interest of *X* in the post derived profit of *X*				$\frac{20}{100}\times 300$ =[60]	
Step 5. *H* Ltd in *X*'s post-derived profit :	Pre	$\frac{10}{100}\times\frac{80}{100}\times -400$	−32		
	Post	$\frac{10}{100}\times\frac{80}{100}\times +3{,}400$	272		

STATEMENT OF TOTALS

	Rs.	Rs
Total minority interest :		
X Ltd	600*	
Y Ltd	720*	
X Ltd in *Y*'s post-derived profit	60*	
	——	1,380

*On the Statement of Calculation these figures have been shown in [ ]

Total pre-acquisition profit :		
H Ltd in *X* Ltd	+1,600	
H Ltd in *Y* Ltd	− 600	
X Ltd in *Y* Ltd	− 60	
H Ltd in *X*'s post-derived profit	− 32	
	—	908
Total post-acquisition profit :		
H Ltd in *X* Ltd	800	
H Ltd in *Y* Ltd	2,040	
H Ltd in *X*'s derived profit	272	
	——	3,112
Total profits of *X* Ltd and *Y* Ltd (Rs. 3,000 + Rs 2,400)	Rs	5,400

Illustration 33

X Ltd is the parent company of *Y* Ltd and *Z* Ltd. The share capitals of *Y* Ltd and *Z* Ltd are Rs. 1,00,000 and Rs 40,000 respectively (all in Re 1 fully paid shares). Particulars of the holdings are as follows :

	Undistributed profit at the date of purchase of shares	
	Z Ltd	*Y Ltd*
	Rs.	Rs
Y Ltd acquired 5,000 shares in *Z* Ltd	5 000	
X Ltd acquired 30,000 shares in *Z* Ltd	7,000	
X Ltd acquired 80,000 shares in *Y* Ltd	30,000	8,000

At 31st December, 1968, the undistributed profits are *Y* Ltd Rs 40,000 and *Z* Ltd Rs. 10,000. No dividends have been paid or declared and no losses incurred in any of the relevant years.

Show how the total profits of the subsidiary companies will be dealt with in preparing the consolidated balance sheet

Solution :

STATEMENT SHOWING DISTRIBUTION OF PROFIT

	X Ltd	*Y Ltd*	*Z Ltd*
Part 1 Information		←	1/8 (Rs 5,000)
	←		3/4 (Rs 7,000)
	←	8/10 (8,000)	(30,000)
		Rs 40 000	Rs 10,000
Part 2 Calculation			
Step 1. *Minority interest*		1/5 × 40 000 = (8,000)	1/8 × 10,000 = (1,250)

Step 2.	*Holding company's share* in Y Ltd	Pre	4/5×Rs. 8,000	6,400		
		Post	4/5×32,000	25,600		
	in Z Ltd	Pre	3/4×7,000	5,250		
		Post	3/4×3,000	2,250		
Step 4.	*Y's share in Z*	Pre	1/8×5,000		625	
		Post	1/8×5,000		625	
Step 4.	*Minority Interest in post-derived profit of Y*				1/5×625 =[125]	
Step 5.	*Holding company in the post-derived profit of Y Ltd:*	Pre	8/10×1/8×(30,000–5000)	=2,500		
		Post	8/10×1/8 (10,000 –30,000)	=–2,000		

Minority interest :		
in Y Ltd	8,000	
in Z Ltd	1,250	
in the derived profit of Y from Z Ltd	125	
		9,375
Holding company's shares in pre-profits :		
in Y Ltd	6,400	
in Z Ltd	5,250	
Y's share in Z (whole goes to group account)	625	
in Y's derived profit	2,500	
		14,775
Holding company's share in profits :		
in Y Ltd	25,600	
in Z Ltd	2,250	
in the derived profit of Y Ltd	–2,000	
		25,850
Total profits as on the date of consolidation (*i.e.*, 40,000+10,000)	Rs.	50,000

Illustration 34

The Balance Sheet of *A* Ltd, *B* Ltd and *C* Ltd on 31st December, '8, contained the following items relating to the profits and losses of companies—

	A Ltd Rs.	*B Ltd* Rs.	*C Ltd* Rs.
Net Profit (or loss) for year	800	1,800	Dr. 480
Add Balance forward	1,500	Loss 800	Profit 1,920
	Rs. 2,300	Rs 1,000	Rs. 1,440

A Ltd acquired 75% of the share capital of *B* Ltd on 1st August, 1977.

A Ltd acquired 10% of the share capital of *C* Ltd on 1st December, 1978.

B Ltd acquired 80% of the share capital of *C* Ltd on 1st September, 1978.

Prepare draft shedule of consolidated profit and loss account of group showing the amounts to be transferred to other essential ints to be included in the consolidated balance sheet, *i.e.*, the credit of Rs. 4,740.

Solution :

STATEMENT SHOWING DIVISION OF PROFITS

Part I. Information	A Ltd	B Ltd	C Ltd
1st August, 1977	←	75% (467 Dr.)	
1st September 1978		—	80% (1,600 Cr.)
1st December, 1978	—	—	10% (1,480 Cr.)
Profit on 31st Dec. 1978	Rs. 2,300 (Cr.)	Rs. 1,000 (Cr.)	Rs. 1,440 (Cr.)

Part 2. Calculations	A Ltd	B Ltd	C Ltd
Step 1. Minority interest		25/100 × 1,000 = [250]	10/100 × Rs. 1,440 = [144]
Step 2. Holding company in : *B* Ltd—Pre 75/100 × −467 Post 75/100 × 1,4[illegible] *C* Ltd—Pre 10/100 × 1,480 Post 10/100 × −40	 − 350 +1,100 + 148 − 4		
Step 3. *B* Ltd in C Ltd. : Pre Post		80/100 × 1,600 = *1,280* 80/100 × −160 = −128	
Step 4. Minority interest in *B*'s post-derived profit :		25/100 × −128 = [−32]	
Step 5. Holding company in *B*'s post, derived profit : Pre Post 80/100 × 75/100 × −160	*Nil* − 96		

SUMMARY OF CALCULATIONS

	Rs.	Rs.
Minority interest :		
in *B* Ltd	250	
in C Ltd	144	
in *B* Ltd in derived profit from C Ltd.	− 32	
		362
Holding company's share in pre-profits :		
In *B* Ltd	− 350	
in C Ltd	+ 148	
in *B* Ltd's derived profit	+1,280	
in *B* Ltd's post-derived profit	Nil	+1,078
Holding company's share in post-profit :		
in *B* Ltd	1,100	
in C Ltd	− 4	
in *B* Ltd's post-derived profit	− 96	+1,000
Total profit of *B* Ltd and C Ltd (*i.e.*, Rs. 1,000 + Rs. 1,440)		Rs. 2,440

GENERAL ILLUSTRATIONS

Illustration 35

From the following balance sheets of the parent and subsidiary companies prepare consolidated balance sheet as on 31st March, 1978 :

Parent Company Ltd
BALANCE SHEET *as on 31st March, 1978*

		Rs.			Rs.
Capital: Authorised, issued and fully paid— 2,50,000 shares of Re. 1 each		2,50,000	Sundry assets		1,07,168
Reserve for future taxation		48,463	Investment in subsidiary companies at cost—		
General reserve		75,000	*A*-Subsidiary Ltd :	Rs.	
Profit and loss account		23,192	3,760 5% Preference shares of Re. 1 each	2,820	
		3,96,655	10,000 Ordinary shares	10,000	
			B Subsidiary Ltd : 5,000 7% Preference shares of Rs. 10 each	50,000	
4·5% 1st Mortgage debenture Stock—	Rs.		18,800 Ordinary shares of Re. 1 each	2,00,000	
As issued	50,000		*C* Subsidiary Ltd : 50,000 ordinary shares of Re. 1 each	54,000	
Less Purchased and cancelled to date	44,600	5,400	Rs. 1,900 4% Debenture stock	1,500	3,18,320
Loan from *B* Subsidiary Ltd		19,600			
Trade creditors		4,500	Advances to subsidiary companies—		
			A Subsidiary Ltd : Current account	620	
			B Subsidiary Ltd : Current account	47	667
Rs.		4,26,155		Rs.	4,26,155

A Sudsidiary Ltd
BALANCE SHEET *as on 31st March 1978*

		Rs.		Rs.
Capital : Authorised, issued and fully paid—	Rs.		Sundry assets	35,966
5,000 Preference Shares of Re. 1 each	5,000		Profit and loss account	19,602
10,000 Ordinary shares of Re 1 each	10,000	15,000		
Trade creditors		6,403		
Advances by group companies		34,165		
Rs.		55,568	Rs.	55,568

B Subsidiary Ltd
BALANCE SHEET *as on 31st March, 1978*

		Rs.			Rs.
Capital : Authorised, issued & fully paid : 5,000 7% Preference shares of Rs. 10 each	50,000		Sundry assets		1,80,390
20,000 Ordinary shares of Rs. 10 each	2,00,000	2,50,000	Investment— 47,000 Ordinary shares in Parent Co. Ltd at cost price	53,000	
			$3\frac{1}{2}$% Stock at cost	70,000	1,23,000

Reserve for future taxation	19,000	Parent Co. Ltd— Advance A/c	19,60
Profit & loss account	37,429		
Trade creditors	16,433		
Parent Co Ltd Current A/c	47		
Rs.	3,22,909	Rs.	3,22,90

C Subsidiary Ltd

BALANCE SHEET *as on 31st March, 1978*

	Rs.		Rs.
Capital: Authorised, issued fully paid— 50,000 Ordinary shares of Re. 1 each	50,000	Sundry assets	72,73
Reserve for future taxation	9,703	Loan to group companies	33,54
Profit & loss A/c	11,656		
4% Debenture stock (secured)	20,000		
Trade creditors	14,916		
Rs.	1,06,275	Rs	1,06,27

Solution : CONSOLIDATED BALANCE SHEET OF PARENT CO. LTD AND ITS SUBSIDIARIES *as on 31st March, 1978*

				Rs		Rs.
Share capital of Parent Co. Ltd—					Goodwill	21,06
Authorised and issued					Sundry Assets (detailed)	3,96,17
2,50,000 shares of Re. 1 each fully paid			2,50,000		Investments at cost —3½% stock	70,00
Less Shares held by *B* Subsidiary Ltd			47,000	2,03,000		
Reserve & surplus less amount to outside shareholders—						
Debenture stock reserve			400			
Revenue reserve						
General		75,000				
Future taxation		77,166	1,52,166			
Profit and Loss A/c						
Parent Co. Ltd		23,192				
B Subsidiary Ltd	37,429					
Less Minority shareholders : 6%	2,246	35,183				
C Subsidiary Ltd		11,656				
		70,031				
Less A subsidiary Ltd (Loss)		19,602	50,429			
				2,02,995		
				4,05,995		
Minority shareholders—						
A Subsidiary Ltd. Share capital			1,240			
B Subsidiary Ltd :						
Share capital		12,000				
Profit and loss A/c		2,246[1]	14,246	15,455		
Debentures—						
4½% First Mortgage Debenture Stock :						
Issued		50,000				
Less Purchased and cancelled		44,600	5,400			

1. 12/255 or 6% of profits of *B* Ltd = 6% of Rs. 37,429

4% Debenture Stock (*A* Subsidiary Ltd)	20,000				
Less Held by Parent Co. Ltd	1,900				
		18,100			
			23,500		
Current liabilities—Trade creditors			42,252		
		Rs.	4,87,233	Rs.	4,87,233

Internal Loans [eliminated] are –

Liabilities	Rs.	*Assets*		Rs.
Parent Co. Ltd (from *B* Ltd)	19,600	Parent Co. Ltd (to *A* Ltd)	Rs. 620	
A Ltd (from Group Cos.)	34,165	,, ,, ,, (to *B* Ltd)	47	
B Ltd (from Parent Co Ltd)	47			667
		B Ltd (to Parent Co Ltd)		19,600
		C Ltd (to Group Cos.)		33,545
Rs.	53,812		Rs.	53,812

Goodwill—

	SHARES IN					
	A Ltd		*B Ltd*		*C Ltd*	*Parent Co Ltd*
	Preference	Ordinary	Preference	Ordinary	Ordinary	Ordinary
	Rs	Rs.	Rs.	Rs.	Rs.	Rs.
Cost of shares.	2,820	10,000	50,000	2,00,000	54,000	53,000
Par value of shares	3,760	10,000	50,000	1,88,000	50,000	47,000
[Goo]dwill	—	—	—	12,000	4,000	6,000=22,000
[Ca]pital reserves	940	—	—	—	—	= 940
Net cost of goodwill (per (C.B.S.)						Rs. 21,060

SCHEDULE OF PROFIT & LOSS ACCOUNTS

		Parent Co Ltd	*A Subsidiary Ltd*	*B Subsidiary Ltd*	*C Subsidiary Ltd*
		Rs.	Rs.	Rs.	Rs.
Balances as per accounts		23,192	−19,602	37,429	11,656
Add B Ltd	94%	46,010		$\frac{47}{250}$ 11,517	
C Ltd	100%	11,656			
		80,858			
Less A Ltd	100%	19,602			
Less B Ltd	$\frac{47}{250}$	61,256	−19,602	48,946	11,656
		11,517			
		49,739			
Less Parent Company Ltd	100%		−19,602		11,656
Parent Company Ltd	94%			46,010	
Minority shareholders—6% of Rs. 48,946				Rs. 2,936	
	Rs.	49,739			

Formula :

$$H = 23,192 + 11,656 - 19,602 + B\ 94/100$$
$$B = 37,429 + H\ 47/250$$

Illustration 36

The *H* Trust Ltd was formed on 1st January, 1978, with a capital of 2,00,000 shares of Re. 1 each, which were fully subscribed, and on the same day purchased shareholdings in the following companies :

(a) In *R* Ltd... 20,000 shares, price paid, Rs. 25,000
(b) In *S* Ltd... 50,000 shares, price paid, Rs. 56,000.
(c) In *T* Ltd... 80,000 shares, price paid, Rs. 69,000.

Abridged balance sheets of the companies as on 31st December, 1978 are :

Assets	*R* Rs.	*S* Rs.	*T* Rs.
Goodwill	—	10,000	25,000
Land and building	9,000	20,000	11,000
Plant	10,000	40,000	65,000
Stock	7,000	12,000	23,000
Debtors	10,000	13,000	14,000
Cash	4,000	1,000	1,000
Profit and loss account	—	—	6,000
	Rs 40,000	Rs. 96,000	Rs. 1,45,000

Capital and liabilities	*R* Rs.	*S* Rs	*T* Rs
Capital	25,000	60,000	1,00,000
Reserve	4,000	—	17,000
Profit and loss account	5,000	10 000	—
Debentures (6%)	—	10,000	—
Creditors	6,000	16,000	28,000
	Rs. 40,000	Rs. 96 000	Rs. 1,45,000

R Ltd owes Rs. 2,000 to the *H* Trust Ltd *S* Ltd owes *R* Ltd Rs. 1,000 and the *H* Trust Ltd owes Rs 3,000 to *T* Ltd.

It has been decided to write off Rs. 10,000 from the plant of *T* Ltd, since the above balance sheet was prepared. The land and buildings of *S* Ltd were revalued as Rs. 26,000 at the date of the acquisition, but effect has not been given to this in the accounts.

R Ltd & *S* Ltd had credited balances on profit and loss account on 31st December, 1977, of Rs. 2,000 and Rs. 5,000 respectively, all of which distributed within one month in dividends In *T* Ltd there was a debit balance on profit and loss account of Rs. 4,000 on 31st December, 1977. Reserves of *R* Ltd and *T* Ltd on 31st December 1977 were Rs. 4,000 and Rs. 17,000 respectively.

The Goodwill of the *H* Trust Ltd on 31st December, 1978 stands at Rs. 10,000. The dividends for 1978 are : *R* Ltd 9% : and *S* Ltd 15% which have been paid.

Prepare a consolidated balance sheet of the *H* Ltd and its subsidiaries on 31st December, 1978. Ignore tax.

olution :

CONSOLIDATED BALANCE SHEET OF *H* TRUST LTD & ITS SUBSIDIARIES

as on 31st December, 1978

	Rs.	Rs.
Share capital of *H* Trust Ltd		
Authorised & issued—		
2,00,000 shares of Re. 1		
each fully paid		2,00,000
Capital reserve		24,367
Profit & loss account :		
Subsidiary companies		
(per schedule)	2,733	
H Trust Ltd	9,300	
		12,033
6% Debentures		10,000
Minority shareholders		
(per schedule)		39,667
Creditors—		
R Ltd [Rs. 6,000		
—Rs 2,000]	4,000	
S Ltd [Rs. 16,000		
—Rs. 1,000]	15,000	
T Ltd	28,000	
		47,000
Rs.		3,33,067

	Rs.	Rs.	Rs.
Goodwill—			
S Ltd		10,000	
T Ltd		25,000	
H Trust Ltd		10,000	45,000
Sundry assets—			
H Trust Ltd			41,000
Land and buildings—			
R Ltd		9,000	
S Ltd	20,000		
Add Appreciation	6,000		
		26,000	
T Ltd		11,000	
			46,000
Plant—			
R Ltd		10,000	
S Ltd		40,000	
T Ltd	65,000		
Less Written off	10,000		
		55,000	
			1,05,000
Stock—			
R Ltd		7,000	
S Ltd		12,000	
T Ltd		23,000	
			42,000
Debtors—			
R Ltd [Rs. 10,000 —Rs. 1,000]		9,000	
S Ltd		13,000	
T Ltd [Rs. 14,000 —Rs. 3,000]		11,000	
			33,000
Cash—			
R Ltd		4,000	
S Ltd		1,000	
T Ltd		1,000	
H Trust Ltd		15,067	
			21,067
		Rs.	3,33,067

TUTORIAL NOTES

(1) Analysis of Profits :

R Ltd

	Capital Rs.	*Reserve* Rs.
Reserve balance on 1-1-78	4,000	
Profit & loss after dividend 1-1-78	—	
Profit for the year after dividends		5,000
	4,000	5,000
Minority interest 20%	800	1,000
Share of *H* Trust Ltd.	3,200	4 000

S Ltd		
Profit for the year after dividends		10,000
Profit on revaluation of Land and Buildings	6,000	
Minority interest (1/6)	1,000	1,667
Share of *H* Trust Ltd.	5,000	8,333
T Ltd		
Loss on 1-1-78	−4,000	
Reserve on 1-1-78	17,000	
Loss of the year including Rs. 10,000 written of plant		12,000
	13,000	12,000
Minority interest 20%	2,600	−2,400
Share of *H* Trust Ltd.	10,400	−9,600
(2) Cost of Control / Capital Reserve		
R Ltd		
Cost of shares, *Less* dividends out of capital profits		23,400
Paid-up value	20,000	
Capital profits	3,200	23,200
Goodwill		200
S Ltd		
Cost of shares *Less* divident out of capital profits		51,833
Paid-up value	50,000	
Share of capital profit	5,000	55,000
Capital reserve		3,167
Ltd		
Cost of shares		69,000
Paid-up value	80,000	
Less share of capital profit	10,400	90,400
Capital reserve		21,400
onsolidated capital reserve :		Rs.
Capital reserve re. *S* Ltd		3,167
Capital reserve re. *T* Ltd		21,000
		24,567
		200
Less Goodwill re. *R* Ltd		24,367

3) Minority interest :

	R Ltd Rs.	S Ltd Rs.	T Ltd Rs.
Share capital	5,000	10,000	20,000
Capital profits	800	1,000	2,600
Revenue profits	1,000	1,667	−2,400
	6,·00	12,667	20,200
Total			39,667

Profit & loss A/c of *H* Trust Ltd :

Dividends from *R* Ltd @ 90% on Rs. 20,000	1,800
,, *S* Ltd @ 15% on Rs. 50,000	7,500
	9,300

Illustration 37.

The following are the balance sheets of *A* Ltd, *B* Ltd and *C* Ltd as at 31st December, 1972 :

Liabilities	*A* Ltd Rs.	*B* Ltd Rs.	*C* Ltd Rs.
Share capital : (shares of Rs. 100 each)	10,00,000	5,00,000	2,00,000
General reserve	2,00,000	35,000	
Profit & loss account	1,70,000	1,20,000	
Liabilities	1,60,000	3,75,000	1,40,000
Rs.	15,30,000	10,30,000	3,40,000
Assets	*A* Ltd Rs.	*B* Ltd Rs.	*C* Ltd Rs.
Investments :			
4,000 Shares in *B* Ltd	6,00,000		
500 Shares in *C* Ltd	25,000		
1,500 Shares in *C* Ltd		90,000	
Profit and loss account			80,000
Other assets	9,05,000	9,40,000	2,60,000
Rs.	15,30,000	10,30,000	3,40,000

The following information is available:

1. Included in A Ltd's liabilities are Rs. 50,000 due to C Ltd.
2. B Ltd has advanced to C Ltd Rs. 1,00,000.
3. A Ltd acquired its investment in B Ltd on 1st January 1972 on which date the amounts s anding to the credit of General Reserve and Profit and Loss Account in B Ltd was Rs. 35,000 and Rs. 65,000 respectively.
4. A Ltd acquired its investment in C Ltd on 1st January 1972 when the debit balance in the Profit and Loss Account in C Ltd's books was Rs. 60,000.
5. B Ltd acquired its investment in C Ltd on 1st January 1970 when the debit balance in the Profit and Loss Account in C Ltd's books was Rs. 20,000.
6. Neither B Ltd nor C Ltd has paid any dividends.

7. Included in B Ltd's assets are stocks valued at Rs. 60,000 which were invoiced by A Ltd at a price which was 20 per cent above cost.

You are required to prepare a consolidated balance sheet as on 31st December, 1972 showing your workings. (C. A. Final, May 1973)

Solution :

CONSOLIDATED BALANCE SHEET OF *A* LTD AND SUBSIDIARIES *B* LTD AND *C* LTD *as at 31st December, 1972*

Share capital	Rs. 10,00,000	Goodwill		Rs. 89,000
General reserve	2,00,000	Other Assets	Rs. 19,55,000	
Profit & loss account	1,89,000	*Less* : Unrealised profit	8,000	19,47,000*
Liabilities	*5,25,000			
Minority interest	1,22,000			
	20,36,000			20,36,000

TUTORIAL NOTE (1) COST OF CONTROL

	A Ltd in *B* Ltd Rs	*B* Ltd in *C* Ltd Rs.	*A* Ltd in *C* Ltd Rs.		*A* Ltd in *B* Ltd Rs.	*B* Ltd in *C* Ltd Rs	*A* Ltd. in *C* Ltd. Rs.
Cost of share	6,00,000	90,000	25,000	Share capital (Paid-up amount)	4,00,000		
Capital loss 3/4 of 20,000		15,000		Capital profits in *B* Ltd		1,50,000	50,000
				On 1-1-72	1,00,000		
1/4th of 60,000			15,000	*Less* : Share of Rev. loss of *C* Ltd	30,000		
Capital reserve		45,000	10,000		70 000		
				4/5 thereof	56,000		
				goodwill	1,44,000		
Rs.	6,00,000	1,50,000	50,000	Rs.	6,00,000	1,50,000	50,000

*Rs. 50,000 owing by *A* Ltd to C Ltd and Rs. 1,00,000 owing by C Ltd have been deducted from these two items.

Goodwill : *A* in *B*			Rs. 1,44,000
Capital reserve :			
	B in *C*	Rs. 45,000	
	A in *C*	Rs. 10,000	55,000
			89,000

(2) PROFIT AND LOSS (APPROPRIATION) ACCOUNT

	A Ltd Rs.	*B* Ltd Rs.	*C* Ltd Rs.		*A* Ltd Rs	*B* Ltd Rs.	*C* Ltd Rs
To Balance b/d				By Balance b/d			
Loss as on 1-1-70			20,000	*A* Ltd	1,70,000		
1970 & 1971			40,000	*B* Ltd			
1972			20,000	Balance as on 1-1-72		65 000	
To C Ltd loss	5,000	45,000		Profit for 1972		55,000	
To *A* Ltd		32,000		By Cost of Control			
To Minority interest		15,000		*B* in C Ltd			15,000
To Cost of control · *A* in *B* Ltd		25,000		*A* in C Ltd			15,000
				By P & L			

To Stock reserve	8,000			A/c of *B*			45,00
To Balance c/d	1,89,000			By P & L A/c of A	32,000		
				By *B* Ltd.			5,00
Rs.	2,02,000	1,20,000	80,000	Rs.	2,02,000	1,20,000	80,00

NOTES : 1. Revenue loss of *C* Ltd to be debited to :

B Ltd—3/4 of Rs. 60,000, *viz.*, the loss incurred in 197 1971 and 1972.

A Ltd—1/4 of Rs. 20,000, the loss incurred in 1972.

2. Loss of *C* Ltd to be debited to cost of control :

B in *C* Ltd—3/4 of loss as on 1-1-1970, Rs. 20,000.

A in *C* Ltd—1/4 of loss till the end of 1971, *viz.*, R 60,000.

3. Profit in *B* Ltd after debiting Rs. 45,000 (loss from Ltd) is Rs. 75,000 made up as :

(*a*) As on 1-1-72 : Rs. 65,000 less Rs. 30,000, *i.e.*, 3/4 the loss of *C* in 1970 and 1971 or Rs. 40,000 : F 35,000.

(*b*) Profit for 1972 : Rs. 55,000 less Rs. 15,000, *i.e.*, 3 of the loss in *C* in 1972 of Rs. 40,000—

(*i*) 4/5 of (*a*), *i.e.*, Rs. 28,000 is to be credited cost of control (*A* in *B* Ltd) ;

(*ii*) 4/5 of (*b*), *i.e.*, Rs. 32,000 is to be credited A's P & L A/c ;

(*iii*) 1/5 of Rs. 75,000 is to be credited to minor interest ;

(*iv*) Stock reserve is 4/5 of the unrealised pro *i e.*, 20/120 of Rs. 60,000.

(3) Minority interest (only in *B* Ltd) :

Share capital	Rs. 1,00,0
Share of profits	15,0
Share of general reserve	7,0
	1,22,0

Illustration 38

Ends Ltd is a subsidiary of Odds Ltd. Odds Ltd acquired its ho ing of ordinary shares in Ends Ltd as follows :

90,000 Shares on December 31, 1975, for Rs. 1,12,100 ;

30,000 Shares on December 31, 1976, for Rs. 38,000.

Ends Ltd provided in its accounts for dividends of 5 per cent on preference capital and 10 per cent on its ordinary capital for each of years 1975 and 1976, such dividends being paid in February following end of the accounting year. Odds Ltd made no entry in its bo in respect of the dividend from Ends Ltd until the date

receipt. The directors of Ends Ltd have recommended the payment of the preference dividend for 1977. No ordinary dividends for 1977 are proposed by either company.

The following is a summary of the balances in the books of the two companies as on December 31, 1977 :

	Odds Ltd	*Ends Ltd*
	Rs.	Rs.
Fixed assets	2,47,000	2,32,400
1,20,000 Ordinary shares in Ends Ltd	1,41,000	—
Bills receivable (accepted by Odds Ltd)	—	600
Current assets	1,61,700	1,13,000
	Rs. 5,49,800	Rs 3,46,000
Share capital—Authorised and issued :	Rs.	Rs.
Shares of Re. 1 each fully paid ordinary	3,00,000	1,60,000
5 per cent preference	—	48,000
[illegible]	12,000	—
[illegible]	64,000	51,000
[illegible]	51,000	25,000
[illegible]	1,800	—
[illegible]	1,21,000	62,000
	Rs. 5,49,800	Rs. 3,46,000

Note to balance sheet of Ends Ltd :

There is a contingent liability in respect of a discounted bill for Rs. 1,200 accepted by Odds Ltd. The whole share capital of Ends Ltd was issued in 1971.

The balance on the profit and loss account of Ends Ltd on December 31, 1977 is made up as follows :

Balance, December 31, 1975			Rs 14,400
Profit, 1976		Rs. 20,000	
Less Dividends paid for 1976 :			
Preference	2,400		
Ordinary	16,000		
		18,400	
			1,600
			16,000
Profit, 1977			9,000
			Rs. 25,000

You are required to prepare the consolidated balance sheet as on December 31, 1977. Ignore taxation. (C. A Final)

Solution :

CONSOLIDATED BALANCE SHEET OF ODDS LTD AND ENDS LTD
as on 31-12-77

		Rs.			Rs.
Share capital : Authorised, issued and fully-paid : 3,00,000 shares of Re. 1 each		3,00,000	Goodwill, being excess of cost of shares in subsidiary over net assets attributable thereto		7,000
Consolidated Profit and Loss Account		65,850	Fixed Assets : Cost	Rs. 4,79,400	
			Less Depreciation	1,15,000	3,64,400
Minority interest : In Subsidiary		96,050	Current Assets :		2,74,700
Current Liabilities: Bills payable	1,200				
Other current liabilities	1,83,000	1,84,200			
Rs.		6,46,100	Rs.		6,46,100

TUTORIAL NOTES

(1) GOODWILL

	Rs.		Rs.
Cost of 90,000 shares in Ends Ltd purchased Dec. 31, 1975	1,12,100	Share Capital : Ends Ltd—Nominal value of shares	90,000
Less Dividend for 1975	9,000	Profits and loss account—Ends pre-acquisition profits : 9/16ths × Rs. 14,400	8,100
	1,03,100	Share Capital : Ends Ltd Nominal value of shares	30,000
of 30,000 shares in Ends Ltd purchased Dec. 31, 1976	38,000	Dividend from Ends Ltd—Dividend on Rs. 30,000 paid out of pre-acquisition profits	3,000
		Profit and Loss Account : Ends Ltd pre-acquisition profits—3/16ths × Rs. 16,000	3,000
		Balance being goodwill	7,000
Rs.	1,41,100	Rs.	1,41,100

(2) MINORITY INTERESTS

		Rs.	Rs.
48,000 Preference shares		48,000	
Dividend thereon for 1977		2,400	50,400
40,000 Ordinary shares		40,000	
Profit and loss account Balance	Rs. 25,000		
Less Preference dividend, 1977	2,400		
	4/16ths of Rs. 22,600	5,650	45,650
			Rs. 96,050

(3) CONSOLIDATED PROFIT AND LOSS ACCOUNT

		Rs.	Rs.
Odds Ltd - Balance		51,000	
Add Dividend from Ends Ltd for 1976		9,000	
			60,000
Ends Ltd : Balance		25,000	
Less Transfer to goodwill :			
on 90,000 holdings	Rs. 8,100		
on 30,000 holdings	3,000		
	11,100		
Preference dividend for 1977	2,400		
Minority ordinary shares	5,650		
		19,150	
			5,850
			Rs. 65,850

Illustration 39

The following condensed balance sheets of Company *H* and Company *S* were prepared as on 31st December, 1974 :

Assets		*H Ltd* Rs.	*S Ltd* Rs.
Goodwill		1,12,000	40,000
Plant & machinery		95,000	50,400
Furniture		7,000	4,600
9,000 ordinary shares in *S* Company		1,20,000	—
2,000 ordinary shares in *H* Company		—	24,000
Stock-in-trade		48,000	1,14,000
Sundry debtors		70,000	45,000
Cash at bank		17,000	13,000
	Rs.	4,69,000	2,91,000

Liabilities			
Share capital :			
Ordinary shares Rs. 10 each		1,80,000	1,00,000
7½% Pref. shares of Rs 10 each		1,50,000	80,000
Premium on ordinary shares		36,000	—
Reserves		26,000	30,000
Sundry creditors		17,000	61,000
Profit & loss account		60,000	20,000
	Rs.	4,69,000	2,91,000

Sundry creditors of *H* Ltd include Rs. 15,000 due to company *S* Ltd [illegible] of the shares. These goods are [illegible] of *H* Ltd include goods costing Rs. [illegible]

H Ltd acquired the share of *S* Ltd on 1st July, 1974. As at the date last preceding balance sheet of company *S*, *viz.*, *31st Dec.*, 1973 ; the plant and machinery stood in the books at Rs. 56,000, the [illegible] at Rs. 8,000. The [illegible] of the share of [illegible] n the books of *S* Ltd.

Both the companies have provided depreciation on all their fixed assets at 10% per annum.

You are required to prepare a consolidated balance sheet as on 31st December, 1974 and supporting schedules for major computations.

(C. A. Final)

CONSOLIDATED BALANCE SHEET OF *H* LTD. AND ITS SUBSIDIARY *S* LTD.

as on December 31, 1974

Liabilities	Rs.	Rs.
Share Capital :		
15,000 7-1/2% Pref. shares of Rs. 10 each fully paid		1,50,000
18,000 Ordinary shares of Rs. 10 each fully paid	1,80,000	
Less 2,000 shares held by *S* Ltd, the subsidiary	20,000	1,60,000
Reserve & Surplus :		
Share premium	36,000	
Less on shares held by *S* Ltd.	4,000	32,000
Reserves	26,000	
Less Treated as capital profit	9,756	16,244
Profit and loss accounts	60,000	
Less Pref. dividend payable	11,250	
	48,750	
ofit of *S* Ltd.	2,660	
	51,410	
Less Due to minority shareholders	774	
	50,636	
Less Stock reserve	2,670	47,966
rrent Liabilities nd provisions :		
-current liabilities :		
dry creditors :		
Ltd	17,000	
Ltd	61,000	
	78,000	
ss Owing by *H* Ltd *S* Ltd	15,000	63,000
rovisions :		
isions for Pref. idend		11,250
rity interest		1,02,529
Rs.		5,82,989

Assets		Rs.	Rs.
Fixed assets :			
Goodwill *H* Ltd		1,12,000	
S Ltd		40,000	
		1,52,000	
Less Capital reserve		21,801	1,30,199
Plant & Machinery :			
H Ltd		95,000	
S Ltd	50,400		
Appreciation	6,800		
	57,200		
Less : Depreciation (additional)	340	56,860	1,51,860
Furniture : *H* Ltd		7,000	
S Ltd		4,600	11,600
Current Assets :			
Stock-in-trade :			
H Ltd		48,000	
S Ltd		1,14,000	
		1,62,000	
Less Stock reserve		2,670	1,59,330
Sundry Debtors :			
H Ltd		70,000	
S Ltd		45,000	
		1,15,000	
Less Owing by *H* Ltd to *S* Ltd		15,000	1,00,000
Cash at bank :			
H Ltd		17,000	
S Ltd		13,000	30,000
Rs.			5,82,989

TUTORIAL NOTES

1. It has been assumed that *S* Ltd has acquired shares in *H* Ltd before 1st July, 1974, the date of purchase of shares by *H* Ltd in *S* Ltd because as per Section 42(3) of the Companies Act, it is not legal to purchase shares by the subsidiary company in the holding company after it has become subsidiary company.
2. In this case calculations of holding company's share in capital profits and revenue profits of subsidiary company and minority interest are to be done with the help of criss-cross formula. This is necessary because of inter-company investment. *S* Ltd is entitled to its share in the profits of *H* Ltd by virtue of its holdings in *H* Ltd. Any profit going to *S* Ltd from *H* Ltd will flow back to *H* Ltd to the extent *H* Ltd has acquired shares in *S* Ltd. But when *H* Ltd's claim in *S* Ltd is calculated separately for revenue profit and capital profits which depends upon the date of purchase of shares by *H* Ltd in *S* Ltd, *i.e.*, 1st July, 1974 in this case It is, therefore, essential to know how much profits were earned by *S* Ltd before 1st July, 1974 and after 1st July, 1974. This earning must include the dividend which *S* Ltd will receive from *H* Ltd. In order to do that, it has become inevitable to know how much dividend *H* Ltd paid to *S* Ltd out of profits earned by *H* Ltd before 1st July, 1974. For this it has been presumed that *H* Ltd had following profits on 1st July, 1974 :

All Reserves	Rs.	26,000
Profits (assumed)		10,000
	Rs.	36,000

3. Share premium of *H* Ltd is not touched for the purpose of calculation of *S* Ltd's share in *H* Ltd ; as per Section 78 of the Act it is treated almost equivalent to share capital.
4. For calculating revenue profits of *H* Ltd after deducting Rs. 10,000 (capital profits assumed to have been earned before 1st July, 1974) [illegible]dend. It is [illegible] in respect [illegible]00. Thus [illegible] *i.e.*, Rs. Rs. 60,000 – Rs. 10,000 – Rs. 11,250.
5. Profits earned by *S* Ltd after 1st Jan., 1974 are Rs. 12,000 (*i.e.*, Rs. 20,000 – Rs. 8,000). Out of Rs. 12,000, if claim of preference dividend of Rs. 6,000 ($7\frac{1}{2}\%$ of Rs. 80,000) is deducted, Rs. 6,000 is left which can be treated as profits during the year. This may be divided into two equal parts to know earnings before and after 1st July, 1974. The statement of capital and revenue profits for company *S* may be put as follows :

	Capital Rs.	*Revenue* Rs.
Appreciation in Plant (*see* 6 below)	6,800	—
Reserves on 1st July, 1974	30,000	—

Profits on 1st January, 1974	8,000	—
Profits on 1st July, 1974	3,000	—
Profits after 1st July, 1974		3,000
Less Depreciation after 1st July, 1974 (*see* 7)		(340)
	Rs. 47,800	Rs. 2,660

6. Capital profits on the appreciation in value of machinery is as follows :

Plant and machinery on 1-1-1974	56,000
Plant and machinery on 31-12-1974	50,400
Total depreciation of the year	5,600
Rate of Depreciation	10% p.a.
∴ Book value of plant on the date of acquisition should be Rs. 56,000 *Less* depreciation at 10% p.a. for 6 months, *i.e.*, Rs 56,000 – Rs 2,800.	53,200
Revised value of plant on the date of acquisition	60,000
∴ Appreciation in the value of plant (treated as capital profit)	6,800

7. Increase in the value of asset results in increased depreciation, *i.e.*, at 10% p.a. on Rs. 6,800 for 6 months 340

8. Division of capital profits between *H* Ltd and minority interest of *S* Ltd.

Let total capital profits of *H* Ltd be h
and that of *S* Ltd be s

Then, $h = 36{,}000 + \frac{9}{10}s$; and

$$s = 47{,}800 + \frac{1}{9}h$$

By solving the equations, we get
$s = 57{,}556$
$h = 87{,}800{\cdot}4$

Minority interest $= \frac{1}{10} \times$ Rs. 57,556 = Rs. 5,755

Share of *H* Ltd $= \frac{9}{10} \times$ Rs. 57,556 = Rs. 51,801

This is deducted from the cost of control.

Division of revenue profits between *H* Ltd and minority interest of *S* Ltd :

Let total revenue profits of *H* Ltd be x,
and total revenue profits of *S* Ltd be y.

Then $x = 38{,}750 + \frac{9}{10}y$

$$y = 2{,}660 + \frac{1}{9}x$$

By solving the above equations, we get
$y = 7{,}739$ (approximately)

Share of minority interest $= \frac{1}{10} \times$ Rs. 7,739 = Rs. 774

Share of *H* Ltd in total revenue profits = Rs. 38,750 + Rs. 2,660 − Rs. 774 (Minority interest)

= Rs. 40,636.

However, this total revenue profits of *H* Ltd calculated after deducting minority interest is to be further adjusted for the consolidated balance sheet in the light of unrealised profits which is Rs. 2,670 (*see* 11 *below*).

∴ Total revenue profit to be shown in balance sheet is Rs. *40,636 less* unrealised *profits* Rs. 2,670, *i.e.*, Rs. 37,966.

10. Share of *H* Ltd in the capital profits of *S* Ltd as per (8) is Rs. 51,801. This is the total amount which can appear in the consolidated balance sheet as capital profits. But capital profits coming from *S* Ltd (Rs. 47,800 *less* minority interest in capital profits Rs. 5,755) is Rs. 42,045. Hence, *H* Ltd own capital profits should be Rs. 51,801 − 42,045 = Rs. 9,756 is treated as included in reserves and is deducted from there in the consolidated balance sheet.

11. *Unrealised Profit* $= \frac{10}{110} \times$ *Rs. 33,000* = Rs. 3,000

(on Rs. 33,000 at 10% above cost)

Less Minority interest $\left(\frac{1}{10} \times \text{Rs. } 3{,}000\right)$		Rs. 300
		2,700
Less Further minority interest because of inter-company investment, *i.e.*, $\frac{1}{10} \times \frac{1}{9} \times$ Rs. 2,700		30
Net unrealised profit	Rs.	2,670

Total profit earned by *S* Ltd on the sale of stock of Rs. 33,000 is Rs. 3,000. This profit is assumed to be earned by *S* Ltd but remains unrealised for *H* Ltd to the extent they are interested in *S* Ltd. *H* Ltd has 9/10th interest in *S* Ltd, therefore, 9/10 × Rs. 3,000, *i.e.* Rs 2,700 is not earned by *H* Ltd. This belongs to the shareholders of *H* Ltd. When it goes to the shareholders of *H* Ltd, then out of this 1/9 (*i.e.*, 2,000 out of 18,000 shares) is to go back to *S* Ltd. Hence ... Rs. 300 of which 1/10th

...10. Thus out

of minority

now left is

12. *Minority interest :*

Preference share capital	Rs.	60,000
Add Dividend payable		6,000
		66,000

Equity share capital	10,000	
Add Share in capital profits	5,755	
Add Share in revenue profits	744	
		16,529
		Rs. 1,02,529

13. *Cost of Control* :

(*a*) *For shares purchased by H Ltd. in S Ltd.*

		Rs.
Amount paid for shares		1,20,000
Less Face value of shares		90,000
		30,000
Less Capital profits		51,801
Capital reserve (deducted from total goodwill)	Rs.	21,801

(*b*) *For shares purchased by S Ltd. in H Ltd.*

Amount paid for shares	Rs.	24,000
Less Face value of shares		20,000
Goodwill	Rs.	4,000

(This amount is deducted from premium as this must have been paid for it. Alternatively, it could be added to goodwill instead of deducting from share premium.)

Illustration 40

On 1st January, 1963 *X* Ltd acquired 90% of the shares of *Y* Ltd and 80% of the shares of *Z* Ltd. With a view to increase its holding in *Z* Ltd, *X* Ltd disposed of 400 shares in *Y* Ltd at a price of Rs. 160 per share on 30th June, 1963 and on the said date purchased a further 10% of the shares of *Z* Ltd in exchange for the proceeds received on the sale of shares of *Y* Ltd.

The following are the balance sheets of these three companies as on 31st December, 1963 in a condensed form :

Assets	*X Ltd* Rs.	*Y Ltd* Rs.	*Z Ltd* Rs.
Fixed assets	1,20,000	3,80,000	3,40,000
Current assets	2,27,000	2,40,000	4,10,000
Loans and advances	95,000	25,000	—
Investments :			
Shares of *Y* Ltd	4,40,000	—	—
Shares of *Z* Ltd	4,28,000	—	—
Rs.	13,10,000	6,45,000	7,50,000

Liabilities		*X Ltd* Rs.	*Y Ltd* Rs.	*Z Ltd* Rs.
Share Capital :				
Ordinary shares of Rs. 100 each		7,00 000	4,00,000	2,00,000
Other liabilities		3,77,000	1,35,000	2,00,000
Profit & loss (surplus) account		2,33,000	1,10,000	3,50,000
	Rs.	13,10,000	6.45,000	7,50,000

Each of the companies has maintained a consolidated profit and loss (surplus) account, which shows the following position :

		X Ltd Rs.	*Y Ltd* Rs.	*Z Ltd* Rs.
Balance as on 1st January, 1963		3,33,000	1,20 000	2,90,000
Net profit for 1963		40,000	30,000	80,000
		3,73,000	1,50,000	3,70,000
Less Dividends		1,40,000	40,000	20,000
	Rs.	2,33,000	1,10,000	3,50,000

The investment accounts in the books of *X* Ltd are carried at cost except the account representing investment in *Y* Ltd, which has been credited with the proceeds of the 400 shares sold, *viz.*, Rs. 64,000.

You are required to prepare (*i*) the consolidated balance sheet as on 31st December, 1963 ; and (*ii*) the supporting work sheet.

(C.A. Final Nov., 1964)

CONSOLIDATED BALANCE SHEET OF X LTD & ITS SUBSIDIARIES *Y* LTD & *Z* LTD
as on December 31, 1963

Liabilities		Rs	*Assets*		Rs
Share capital—7,000 shares of Rs. 100 each (fully paid)		7,00,000	Goodwill		15,000
Investment reserve		8,000	Fixed assets :	Rs	
Profit & loss account :			*X* Ltd	1,20,000	
X Ltd (*see* note 2)	Rs 2,24,000		*Y* Ltd	3,80,000	
Y Ltd	Nil		*Z* Ltd	3,40,000	8,40,000
Z Ltd	51,000	2,75,000	Current assets and loans and advances :		
Other liabilities :			(*a*) Current assets		
X Ltd	3,77,000		*X* Ltd	2,27,000	
Y Ltd	1,35,000		*Y* Ltd	2,40,000	
Z Ltd	2,00,000	7,12,000	*Z* Ltd	4,10,000	8,77,000
Minority interest :			(*b*) Loans and advances :		
Y Ltd	1,02,000		*X* Ltd	95,000	
Z Ltd	55,000	1,57,000	*Y* Ltd	25,000	[illegible]
	Rs.	18,52,000		Rs	[illegible]

TUTORIAL NOTES

1. *Calculation of profit made on sale of investments :*
   Price paid for shares in *Y* Ltd (amount *given*)— 3,200 shares Rs. [illegible]
   Add Sale proceeds of 400 shares @ Rs. 160 each [illegible]

Total for 3,600 shares	Rs. 5,04,000
Price per share 5,04,000÷3,600	140
Profit on 400 shares @ Rs. 20 per share (Rs. 160—Rs. 140) being capital profit treated as investment reserve	8,000

The amount is to be debited to investment account and credited to investment reserve. In the absence of cost price per share the sale proceeds of 400 shares have been added. This has been adopted only as a crude way of measuring the cost price of 400 shares.

2. The books of *X* Ltd do not show separately the amount of dividend received from the *subsidiaries. It means that the amount so* received has already been included in the profits made during the year. *X* Ltd is to get 80% of dividend from *Y* Ltd, *i.e.*, Rs. 32,000 and 90% *of dividend from Z Ltd, i.e., Rs. 18,000.*

   In the case of *Y* Ltd it has made the total profits of Rs. 30,000 as against the total dividend paid by it of Rs. 40,000. It, therefore, means that the dividend of Rs. 10,000 has been paid out of past profits. For *X* Ltd $\frac{1}{4}$ of the dividend received, *i.e.*, Rs. 8,000 (*i.e.*, $\frac{1}{4}\times$ Rs. 32,000) should be out of pre-acquisition profits and hence is a capital profit for *X* Ltd. It should be debited to profit and loss account and credited to investment reserve account.

   Similarly, dividend received by *X* Ltd from *Z* Ltd on 200 shares is to be divided into two parts, *i.e.*, dividend from 1st January to 30th June and from 1st July to 31st December. The dividend for the first six months is a capital profit because it is a pre-acquisition profit. It should also be debited to profit and loss account and credited to investment reserve account.

3. Division of profits of *Y* Ltd and *Z* Ltd in capital and revenue may be as follows :

	Capital Profit	*Revenue Profit*
Y Ltd	Rs.	Rs.
Balance b/f from 1962	1,20,000	...
Add Current year's profit after dividend	Nil	...
Less Profit utilised for dividends in 1963	10,000	...
	1,10,000	...
Less Share of minority interest	22,000	...
Share of *X* Ltd in *Y* Ltd	Rs. 88,000	Nil
Z Ltd		
Balance b/f from 1962	2,90,000	...
Current year's profit after dividends	—	60,000
Less Minority interest (10%)	29,000	6,000
	2,61,000	54,000

Less Transfer from revenue profit to capital profit pertaining to 200 shares acquired on 30th June	+3,000	−3,000
Share of *X* Ltd	2,64,000	51,000

4. *Calculation of minority interest* :

	Y Ltd Rs.		*Z Ltd* Rs.
Shares	80,000		20,000
Add Share in capital profits	22,000		29,000
Add Share in revenue profit	Nil		6,000
Total	1,02,000	Rs. 1,57,000	55,000

5. *Calculation of cost of control* :

		Rs.
Book value of investments :		
Y Ltd		4,40,000
Z Ltd		4,27,000
		8,67,000
Less Face value of shares :		
Y Ltd	3,20,000	
Z Ltd	1,80,000	
		5,00,000
		3,67,000
Less *X* Ltd's share in capital profits of *Y* Ltd and *Z* Ltd :		
Y Ltd	88,000	
Z Ltd	2,64,000	3,52,000
Cost of control		Rs. 15,000

Illustration 41

From the following three balance sheets as on 31st January, 1964 prepare a consolidated balance sheet as on that date :

A LTD

Liabilities	Rs.	*Assets*		Rs.
Share capital :		Fixed assets		5,00,000
7,00,000 shares of Re. 1 each	7,00,000	Investments in subsidiaries :		
Loans from *B* Ltd	1,00,000	40,000 shares in *B* Ltd (at cost)	5,00,000	
Current liabilities	5,00,000	1,00,000 shares in *C* Ltd (at cost)	80,000	
Profit and loss account	1,80,000			5,80,000
		Current assets, loans and advances		4,00,000
Rs.	14,80,000		Rs.	14,80,000

B LTD

Liabilities		Rs.	Assets	Rs.
Equity share capital :			Fixed assets	3,00,000
50,000 shares of Rs. 10 each		5,00,000	Current assets, loans and advances	4,00,000
Current liabilities		1,50,000		
Profit and loss account :				
Pre-acquisition profit	10,000			
Post-acquisition profit	40,000			
		50,000		
Rs.		7,00,000	Rs.	7,00,000

C LTD

Liabilities		Rs.	Assets	Rs.
Equity share capital :			Fixed assets	1,50,000
1,00,000 shares of Re. 1 each		1,00,000	Investments :	
Current liabilities		1,75,000	5,000 shares in *B* Ltd (at cost)	60,000
Profit and loss account :			Current assets, loans and advances	1,40,000
Post-acquisition	90,000			
Less Pre-acquisition loss	15,000			
		75,000		
Rs.		3,50,000	Rs.	3,50,000

Solution :

CONSOLIDATED BALANCE SHEET OF 'A' LTD AND ITS SUBSIDIARIES 'B' LTD. AND 'C' LTD.

as on 1st January, 1964

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Share capital :			Goodwill :		
7,00,000 Shares of Re. 1 each		7,00,000	*B* Ltd	92,000	
Minority interest		55,000	*B* Ltd *via C* Ltd	9,000	
				1,01,000	
Current liabilities :			*Less* Capital reserve		
A Ltd	5,00,000		C Ltd	5,000	
B Ltd	1,50,000				96,000
C Ltd	1,75,000		Fixed Assets :		
		8,25,000	*A* Ltd	5,00,000	
Profit and Loss Account :			*B* Ltd	3,00,000	
A Ltd	1,80,000		C Ltd	1,50,000	
A Ltd's share in *B* Ltd (4/5)	32,000				9,50,000
A Ltd's share in *C* Ltd (100%)	90,000		Current assets, loans and advances :		
A Ltd's share in *B* Ltd *via*, *C* Ltd (100% of 1/10)	4,000		*A* Ltd	4,00,000	
			B Ltd	3,00,000	
			C Ltd	1,40,000	
		3,06,000			8,40,000
Rs.		18,86,000	Rs.		18,86,000

Note : The Companies Act, 1956, has not prescribed any form of the consolidated balance sheet, since the Act does not require the preparation of such a balance sheet.

TUTORIAL NOTES

(1) Cost of Control | Capital Reserve

	Rs.
Share Capital	5,00,000
Profit on acquisition	10,000
	5,10,000

A Ltd's Share :	
$\frac{40,000}{50,000}$ of 5,10,000	4,08,000
Compare : Cost of investments by *A* Ltd	5,00,000
Goodwill	92,000
C Ltd's Share :	
$\frac{5,000}{50,000}$ of 5,10,000	51,000
Compare : Cost of investments by *C* Ltd	60,000
Goodwill	9,000

(2) *Minority interest :*

$$\text{Minority interest} = 1 - \frac{40,000+5,000}{50,000} = 1 - \frac{9}{10} = \frac{1}{10}$$

$\therefore$ $\frac{1}{10}$ of equity share capital	50,000
$\frac{1}{10}$th of profit and loss account as on the date of balance sheet	5,000
C Ltd.	55,000

(3) Cost of Control | Capital Reserve

Net Assets as on the date of Acquisition

		Rs.
Share capital		1,00,000
Less Loss on acquisition		15,000
		85,000
Less Cost of investment by *A* Ltd		80,000
Capital reserve	Rs	5,000

Accounting for Investment in Associated Companies

So far the rules and procedure governing consolidation of financial statements in relation to subsidiaries have been explained. Where the

investment does not result in acquiring controlling interest, the practice of the accountants hitherto has been to show the investment in the balance sheet at cost and to credit any dividends received from such investment to profit and loss account as income from investments. This method of treatment known as 'cost method' has been considered as not satisfactory in those cases where the *investment is substantial (although not more* than 50 per cent) and the investor company is in a position to exercise a significant influence in the investee company. In these cases the investee company is called an 'Associated Company' to distinguish it from a 'Subsidiary Company'.

Definition of Associated Company

According to the International Accounting Standards Committee (IASC), an associated company is defined as "an investee company that is not a subsidiary and in respect of which

(*a*) the investor's interest in the voting power of the investee is substantial, and
(*b*) the investor has the power to exercise significant influence over the financial and operating policies of the investee, and
(*c*) the investor intends to retain its interest as a long-term investment."

An investor company is deemed to have significant influence over the investee company when the investment secures for it a voting power of 20 per cent and more. An investor may exercise significant influence in several ways some of which are :

(*i*) having representation on the Board of Directors,
(*ii*) participating in policy-making processes,
(*iii*) having inter-change of managerial personnel, and
(*iv*) dependence for technical information.

Equity Method

For associated companies and also certain subsidiaries the accounts of which cannot be consolidated, IASC has recommended 'equity method' of accounting to record the long-term investments. According to IASC, the recognition of income on the basis of the dividends received as is done under the cost method may not be an adequate measure of the income earned on the investment. This is because the receipt of dividends may bear little relationship to the performance of the investee company, its earnings or the asset values. The application of the equity method of accounting results in more informative reporting of the net assets and income of the investor.

Under the equity method, the investment is carried at a figure which reflects the changes in the net assets of the investee company after acquisition. This is done by debiting the investment account with the investor company's share of profits in the investee company. In case of losses, as there is a drop in the net assets of the investee company, the investment account is credited. Like-wise dividends paid by the investee company result in the reduction of net assets and, therefore, they are credited to investment account. Simultaneously the investor's share of profits or losses in the investee company is to be included in the consolidated profit and loss account. If the investor's share of losses exceeds the carrying amount of investment account, the investment is recorded at

nil value. The equity method is suspended under these circumstances and is revived when the investee company starts reporting gains, but only after its share of the netinco me equals the share of the net losses not recognised during the period when the equity method was suspended.

In brief, the equity method has come into vogue because of the importance the investors attach to earnings as distinct from dividends. That is why even for decisions regarding investments, earnings per share and price/earnings ratio (P.E. Ratio) have become more significant than dividends.

QUESTIONS

1. Consolidate the following Balance Sheets.

	H Rs	*S* Rs.		*H* Rs.	*S* Rs.
Capital Re. 1 shares	1,400	1,000	900 shares in *S* at cost	1,200	—
Creditors	—	500	Sundry assets	200	1,800
Profit and loss account	—	300			
	1,400	1,800		1,400	1,800

When *H* Ltd acquired the shares in *S* Ltd, the profit and loss account the latter had a credit balance of Rs. 200. 39 1

(*Total of B/S Rs. 2,120 ; Minority interest Rs. 130 ; Goodwill Rs. 120*).

2. Consolidate the following Balance Sheets.

	H Rs.	*S* Rs		*H* Rs	*S* Rs
Capital Rs. 10 shares	2,400	1,600	128 shares in *S*	1,000	—
Creditors	—	300	Sundry assets	1,400	1,950
Profit & loss A/c	—	50			
	2,400	1,950		2,400	1,950

On the date of acquisition, *S* had a debit balance of Rs. 100 on profit and loss account. 39 2

(*Capital Reserve Rs. 200 ; Minority interest Rs. 330 , B/S total Rs. 3,350*)

3. Consolidate the following Balance Sheets.

X LTD

	Rs			Rs
1,35,000 shares Re. 1 each fully paid	1,35,000	Land and building		26,400
5% Debenture	28,000	Plant		51,870
Trade creditors	14,350	Fixtures		5,750
General reserve	30,000	Investments in *Y* Ltd—75,000 shares at cost		86,250
Profit and loss account	33,183	Stock in hand		30,960
		Sundry Debtors :		
		Y Ltd	10,205	
		Others	17,735	27,940
		Cash		11,363
Rs	2,40,533		Rs	2,40,533

Y LTD

		Rs.		Rs.
1,00,000 shares Re. 1 each fully paid up		1,00,000	Land and building	18,000
Sundry creditors—			Packing presses	2,380
X Ltd	9,665		Fixtures	570
Others	22,335		Stock	45,000
		32,000	Trade debtors	60,000
Profit & loss account		20,000	Bills receivable	3,504
			Cash	22,546
	Rs.	1,52,000	Rs.	1,52,000

The holding of the parent company in *Y* Ltd was acquired some years earlier at a premium of 15 paise per share, the balance at credit of the profit and loss account of *Y* Ltd being Rs. 10,000.

Transactions between parent and subsidiary include the purchase of goods by *Y* Ltd at cost plus $33\frac{1}{3}\%$. The stock of *Y* Ltd on 31st December consisted of:

Goods from *X*	Rs. 15,008	
Goods from other sources	29,992	
		45,000

Cash amounting to Rs. 540 was in transit from *Y* Ltd to *X* Ltd at the close of business as on 31st December.

You are required to prepare the consolidated balance sheet to be presented to the shareholders of *X* Ltd showing the position on 31st December. 39·3

(Goodwill Rs. 3,750 ; Minority interest Rs. 30,000 ; B/S total Rs. 2,97,554)

4. Consolidate the following Balance Sheets.

	H Rs.	*S* Rs.		*H* Rs.	*S* Rs.
Capital Re. 1 share	1,400	1,000	Sundry assets	885	1,510
Creditors	350	190	Shares in *S* Ltd		
Profit and loss account	260	320	900 shares at cost	1,125	—
	2,010	1,510		2,010	1,510

On the date of acquisition of shares by *H* Ltd in *S* Ltd the credit balance on latter's profit and loss account was Rs. 220. No dividends have been declared since that date. 39·4

(Goodwill Rs. 27 ; Minority interest Rs. 132 ; B/S total Rs. 2,422)

5. From the balance sheets and information given below prepare a consolidated balance sheet.

	B Ltd Rs.	*S Ltd* Rs.		*H Ltd* Rs.	*S Ltd* Rs.
Share capital :			Sundry assets	80,000	12,000
(Rs. 10 per share			Stock-in-trade	61,000	24,000
fully paid)	1,00,000	20,000	Debtors	13,000	17,000
Profit & loss A/c	40,000	12,000	Bills receivable	1,000	...
Reserves	10,000	6,000	Shares in *S* Ltd		
Creditors	20,000	12,000	Rs. 1,500 at cost	15,000	...
[illegible]able	...	3,000			
	1,70,000	53,000		1,70,000	53,000

Additional Information

(*i*) All profits of *S* Co Ltd have been earned since the shares were acquired by *H* Co Ltd but the reserve of Rs. 6,000 was already there at the time.

(*ii*) *Bills accepted by S Co Ltd are all in favour of H Co* Ltd which has discounted Rs. 2,000 of them.

(*iii*) Sundry assets of *S* Co Ltd are undervalued by Rs. 2,000.

(*iv*) The stock-in-trade of *H* Co Ltd includes Rs. 5,000 bought from *S* Co Ltd at a profit to the latter of 25% on cost.

[B. Com. (Hons.) Calcutta 1977]

(Consolidated B/S total Rs. 2,08,250 ; Capital reserve Rs. 6,000 ; Minority interest Rs. 10,000)

6. *H* Ltd acquired 6,000 ordinary shares of Rs. 10 each in *S* Ltd on 31st December 1976. The summarised balance sheets of *H* Ltd and *S* Ltd as on that date were :

	H Ltd Rs.	*S Ltd.* Rs.		*H Ltd* Rs.	*S Ltd* Rs.
Share capital :			Fixed assets	2,53,000	1,28,000
Authorised	4,00,000	1,20,000	Investments in *S* Ltd at cost 6,000 shares of Rs. 10 each	1,00,000	...
Issued and subscribed :	...	...			
30,000 shares fully paid	3,00,000	...			
8,000 shares fully paid		80,000	Stock	30,000	10,000
Capital reserve	...	34,000	Debtors	10,000	10,000
General reserve	20,000	10,000	Balance at bank	10,000	7,000
Profit and loss account	20,000	2,000	Bills receivable including Rs. 700 from *S* Ltd	2,000	..
Bills payable including Rs. 1,000 to *H* Ltd	...	3,500			
Creditors	35,000	17,500			
Proposed dividend	30,000	8,000			
	4,05,000	1,55,000		4,05,000	1,55,000

Note—On balance sheet of *H* Ltd : There is a contingent liability for bills discounted of Rs. 1,200.

You are given the following information.

(*a*) On 1st January 1977, *S* Ltd utilised part of its capital reserve to make a bonus issue of one share for every four shares held.

(*b*) Stock in hand of *H* Ltd includes Rs. 1,800 for goods at invoice price bought from *S* Ltd. When invoicing goods to *H* Ltd, *S* Ltd adds 20% to cost. You are required to prepare the summarised consolidated balance sheet as on 1st January 1977 and show therein how your figures are made up.

(B. Com. Madras, April 1978)

(Consolidated B/S total Rs. 4,59,075 ; Capital Reserve Rs. 275 ; Minori[ty] interest Rs. 33,5

7. Following are the Balance Sheets of Holding Ltd and Subsi[diary] Ltd as at 31st December 1962 :

	H Ltd Rs.	S Ltd Rs.		H Ltd Rs.	S Ltd Rs.
are capital :			Goodwill	40,000	30,000
ares of Rs. 100 each	5,00,000	2,00,000	Land and buildings	2,00,000	1,30,000
eneral reserve on 1st January 1962	1,00,000	60,000	Plant and machinery	1,60,000	90,000
rofit and loss account	1,40,000	90,000	Stock-in-trade	1,00,000	90,000
ills payable	...	40,000	Debtors	20,000	75,000
reditors	80,000	50,000	1,500 shares in S Ltd at cost	2,40,000	...
			Cash at bank	60,000	25,000
Rs.	8,20,000	4,40,000		8,20,000	4,40,000

The profit and Loss Account of *S* Ltd showed a balance of Rs. 50,000 on 1st January, 1962. A dividend of 15 per cent was paid in October, 1962 for the year 1961. This dividend was credited to Profit and Loss Account by *H* Ltd. *H* Ltd acquired the shares in *S* Ltd on 1st July, 1962. The bills payable of *S* Ltd were all issued in favour of *H* Ltd which company got the bills discounted. Included in the stock of *S* Ltd is Rs. 20,000 for goods supplied by *H* Ltd. Included in the stock of *S* Ltd are goods to the value of Rs. 8,000 which are supplied by *H* Ltd at a profit of $33\frac{1}{3}\%$ on cost. In arriving at the value of the *S* Ltd. Shares, the plant and machinery which then stood in the books at Rs. 1,00,000 were revalued at Rs. 1,50,000. The new value was not incorporated in the books. No changes in these assets have been made since that date.

Prepare consolidated Balance Sheet of *H* Ltd as at 31st Decembe 1962. (C.U., B. Com. Hons. 1966) 39

(*Minority interest Rs. 99,375 : Balance Sheet total Rs. 9,89,750*)

8. The following are the balance sheets of *H* Ltd and *S* Ltd as o 31-3-1979, figures being in lakhs of rupees :

Liabilities	*H Ltd* Rs.	*S Ltd* Rs.	*Assets*	*H Ltd* Rs.	*S Lt* Rs
Share capital :			Fixed assets	10	1
Share of Rs. 1,000 each	10	7	Investments in *S* Ltd	5	–
Reserves and surplus :			Current assets	5	
General reserve	3	4			
Profit and loss account	2	2			
Current liabilities	5	7			
Rs.	20	20		Rs. 20	2

The following further information is furnished :

1. *H* Ltd acquired 300 shares in *S* Ltd on 1-4-1978, when th reserves position of *S* Ltd was as under :

(*a*) General reserve 6 lakas (*b*) Profit and loss account balance 3 lakh

2. On 1-9-1978. *S* Ltd issued 2 shares, for every 5 shares held a bonus shares at face value of Rs. 1,000 per share. No entry is made, i the books of *H* Ltd, for the receipt of these bonus shares.

3. On 30-6-1978, *S* Ltd declared a dividend, out of its preacquis tion profits, of 20% on its the then capital. *H* Ltd credited the receipt o dividend to its profit and loss account.

4. *S* Ltd owed *H* Ltd Rs. 3,00,000 for the purchase of stock fro *H* Ltd. The entire stock is held by *S* Ltd on 31-3-1979. *H* Ltd made

profit of 20% on cost.

5. *H* Ltd transferred a plant to *S* for Rs. 2,00,000. The book value of the plant to *H* Ltd was Rs. 1,50,000.

6. The profit and loss account of *H* Ltd, for the year, showed a balance of Rs. 4,00,000. This, after deducting the opening balance (loss) of Rs. 2,00,000, is shown in the balance sheet.

Prepare a consolidated balance sheet as on 31-3-79 **(C.A. Final May, 79)**

(Capital reserve Rs. 2,80,000 ; Minority interest Rs. 5,20,000 ; balance sheet total Rs. 31,40,000).

9. *H* Ltd acquired the whole of the shares in the *S* Ltd as on 1st January, 1977, at a *total* cost of Rs. 11,20,000. The balance sheets on 31st December, 1977, when accounts of both companies were prepared and audited, were as under :

Rs. 11,20,000. The balance sheets
ts of both companies were prepared

The H Limited
BALANCE SHEET
as on 31st December, 1977

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Freehold premises	10,30,000
Authorised and issued—		Machinery	3,00,000
15,000 shares of Rs 100		Stock (*b*)	3,40,000
each fully paid	15,00,000	Debtors	2,80,000
Creditors (*a*)	1,50,000	Investments	11,20,000
General reserve	9,50,000	Cash	3,30,000
Profit & loss account (*c*)	8,00,000		
Rs	34,00,000	Rs	34,00,000

(*a*) Includes Rs. 60,000 for purchase from the *S* Ltd on which the latter company made a profit of Rs. 15,000.

(*b*) Includes Rs. 30,000 stock at cost purchased from the *H* Ltd part of Rs. 60,000 purchases [*see Note* (*a*)].

(*c*) Includes interim dividend at the rate of 10 per cent per annum, free of tax from the *S* Ltd.

The S Limited
BALANCE SHEET
as on 31st December, 1977

Liabilities	Rs.	*Assets*	Rs.
Share capital :		Freehold premises	3,00,000
Authorised and issued—		Machinery	2,71,000
50,000 shares of Rs. 10 each		Stock	2,02,000
fully paid	5,00,000	Debtors	1,58,000
Creditors	1,61,000	Cash	1,10,000
General reserve as on 1st January, 1977	20,000		
Profit and loss account	3,60,000		
Rs.	10,41,000	Rs	10,41,000

Note—The balance on profit and loss account on 1st January 1977 was Rs. 2,80,000, an interim dividend of 10 per cent per annum, free o tax, having been paid during the year in respect of the year ended 31st December, 1977.

Make the necessary adjustments and show a consolidated balance sheet as on 31st December, 1977. 39·9

(Total of consolidated balance sheet Rs. 35,73,500)

10. The following are the summarized balance sheets of *H* Ltd and *S* Ltd as on 31st March, 1969 :

Liabilities	*H Ltd* Rs.	*S Ltd* Rs.	*Assets*	*H Ltd* Rs.	*S Ltd* Rs.
Authorized and issued share capital :			Fixed assets (Net)	5,00,000	4,40,000
Equity shares of Rs. 10 each	6,00,000	2,00,000	15,000 equity shares of *S* Ltd at cost	3,30,000	—
7% Pref. shares of Rs. 100 each	—	1,60,000	1,200 preference shares of *S* Ltd at cost	1,20,000	—
General reserve	1,00,000	80,000	Rs. 10,000 6% Debentures of *S* Ltd at cost	10,000	—
Profit & loss account	1,97,000	88,800	Current assets	2,91,000	2,86,800
6% Debentures	—	40,000			
Proposed dividends :					
On equity shares	60,000	20,000			
On preference shares	—	11,200			
Debenture interest accrued	—	2,400			
Creditors	2,94,000	1,24,400			
Rs.	12,51,000	7,26,800	Rs.	12,51,000	7,26,800

The following particulars are available :

(*a*) The general reserve of *S* Ltd as on 31-3-68 was Rs. 80,000.

(*b*) *H* Ltd acquired the share-cum-dividend in *S* Ltd on 31-3-68.

(*c*) The balance of profit and loss account of *S* Ltd is made up as follows :

	Rs.
Balance as on 31-3-68	56,000
Net Profit—year ended 31-3-69	64,000
	1,20,000
Less Provision for proposed dividends	31,200
	88,800

(*d*) The balance of profit and loss account of *S* Ltd as on 31st March, 1968, is after providing for the preference dividend of Rs. 11,200 and proposed equity dividend of Rs. 10,000 both of which were subsequently paid but credited to profit and loss account of *H* Ltd.

(*e*) No entries have been made in the books of *H* Ltd for debentures interest due from or proposed dividend of, *S* Ltd for the year ended 31st March, 1969.

(*f*) *S* Ltd has issued fully paid bonus shares of Rs. 40,000 on 31st March, 1969, among the existing shareholders by drawing upon the general reserve. The transaction has not been given effect to in the books of *S* Ltd.

You are required to prepare a consolidated balance sheet of *H* Ltd and its subsidiary company *S* Ltd as on 31st March, 1969. 39·10

(I.C.W.A. January, 1970)

(Total of consolidated balance sheet Rs. 15,79,900 ; Minority interest Rs. 1,40,000 ; Goodwill Rs. 62,100)

11. *Grip Ltd which* has an authorised and issued share capital of 1,00,000 ordinary shares of Re. 1 each fully paid had a balance on revenue reserve of Rs. 16,200 on 31st December 1973, after paying a dividend for the year ended on that date.

You are also given the following information :

(1) On 31st October 1974, Grip Ltd purchased 9,000 of the 10,000 issued ordinary shares of Re. 1 each fully paid in Hand Ltd for Rs 14,250. The balance on revenue reserve of Hand Ltd as on 31st December 1973, had been Rs. 3,450 after paying a dividend for the year ended on that date.

(2) For the year ended 31st December 1974, Grip Ltd made a trading profit of Rs. 18,640 and paid a dividend of 15%, whilst Hand Ltd made a trading profit of Rs. 4,000 and paid a dividend of 20%.

(3) For the year ended 31st December 1975, Grip Ltd made a trading profit of Rs. 26,540 and paid a dividend of 20% whilst Hand Ltd incurred a trading loss of Rs 4,100 and no dividend was paid.

(4) During the year ended 31st December 1975, Hand Ltd had manufactured and sold to Grip Ltd an item of plant for Rs. 8,000 which included a profit on selling price to Hand Ltd of 25%. The plant had been included in the fixed assets of Grip Ltd and a full year's depreciation had been provided thereon at 20% on cost.

You are required to show how the above items would be reflected in [illegible] 31st December 1975, [illegible] ing year, and to pro- [illegible] the figures contained therein. 39·23

(Professional Examination—England, May 1976)

[(*Capital reserve Rs. 855 ; Minority interest Rs. 1,135 (1975) Rs. 1,545 (1974) ; Revenue reserve Rs. 21,850 (1975)*]

12. The following is a summary of the balances in the books of Black Ltd and Bird Ltd as on 31st March, 1965 :

Credits :	*Black Ltd* Rs.	*Bird Ltd* Rs.
Authorised and issued capital, fully paid :		
Ordinary shares of Re. 1 each	3,00,000	1,00.000
7% Non-cumulative preference shares of Re. 1 each	—	80,000
General reserves	50,000	40,000
Profit and loss account	98,500	44,400
Provision for depreciation of fixed assets	60,000	30,000
6% Debentures	—	20,000
Proposed dividends on ordinary shares	30,000	10,000
Proposed dividends on preference shares	—	5,600
Debenture interest accrued	—	1,200

Make the necessary adjustments and show a consolidated balan sheet as on 31st December, 1977. 39

(Total of consolidated balance sheet Rs. 35,73,50

10. The following are the summarized balance sheets of *H* Ltd an *S* Ltd as on 31st March, 1969 :

Liabilities	*H Ltd* Rs.	*S Ltd* Rs.	*Assets*	*H Ltd* Rs.	*S Ltd* Rs.
Authorized and issued share capital :			Fixed assets (Net)	5,00,000	4,40,000
Equity shares of Rs. 10 each	6,00,000	2,00,000	15,000 equity shares of *S* Ltd at cost	3,30,000	—
7% Pref. shares of Rs. 100 each	—	1,60,000	1,200 preference shares of *S* Ltd at cost	1,20,000	—
General reserve	1,00,000	80,000	Rs. 10,000 6% Debentures of *S* Ltd at cost	10,000	—
Profit & loss account	1,97,000	88,800	Current assets	2,91,000	2,86,800
6% Debentures	—	40,000			
Proposed dividends :					
On equity shares	60,000	20,000			
On preference shares	—	11,200			
Debenture interest accrued	—	2,400			
Creditors	2,94,000	1,24,400			
Rs.	12,51,000	7,26,800	Rs.	12,51,000	7,26,800

The following particulars are available :

(*a*) The general reserve of *S* Ltd as on 31-3-68 was Rs. 80,000.

(*b*) *H* Ltd acquired the share-cum-dividend in *S* Ltd on 31-3-68.

(*c*) The balance of profit and loss account of *S* Ltd is made up as follows :

	Rs.
Balance as on 31-3-68	56,000
Net Profit—year ended 31-3-69	64,000
	1,20,000
Less Provision for proposed dividends	31,200
	88,800

(*d*) The balance of profit and loss account of *S* Ltd as on 31st larch, 1968, is after providing for the preference dividend of Rs. 11,200 ıd proposed equity dividend of Rs. 10,000 both of which were subquently paid but credited to profit and loss account of *H* Ltd.

(*e*) No entries have been made in the books of *H* Ltd for debentures erest due from or proposed dividend of, *S* Ltd for the year ended 31st arch, 1969.

(*f*) *S* Ltd has issued fully paid bonus shares of Rs. 40,000 on 31st ırch, 1969, among the existing shareholders by drawing upon the gene- reserve. The transaction has not been given effect to in the books of Ltd.

You are required to prepare a consolidated balance sheet of *H* Ltd its subsidiary company *S* Ltd as on 31st March, 1969. 39·10

(I.C.W.A. January, 1970)

al of consolidated balance sheet Rs. 15,79,900 ; Minority interest Rs. 1,40,000 ; Goodwill Rs. 62,100)

11. Grip Ltd which has an authorised and issued share capital of 1,00,000 ordinary shares of Re. 1 each fully paid had a balance on revenue reserve of Rs. 16,200 on 31st December 1973, after paying a dividend for the year ended on that date.

You are also given the following information :

(1) On 31st October 1974, Grip Ltd purchased 9,000 of the 10,000 issued ordinary shares of Re. 1 each fully paid in Hand Ltd for Rs. 14,250. The balance on revenue reserve of Hand Ltd as on 31st December 1973, had been Rs. 3,450 after paying a dividend for the year ended on that date.

(2) For the year ended 31st December 1974, Grip Ltd made a trading profit of Rs. 18,640 and paid a dividend of 15%, whilst Hand Ltd made a trading profit of Rs. 4,000 and paid a dividend of 20%.

(3) For the year ended 31st December 1975, Grip Ltd made a trading profit of Rs 26,540 and paid a dividend of 20% whilst Hand Ltd incurred a trading loss of Rs. 4,100 and no dividend was paid.

(4) During the year ended 31st December 1975, Hand Ltd had manufactured and sold to Grip Ltd an item of plant for Rs. 8,000 which included a profit on selling price to Hand Ltd of 25%. The plant had been included in the fixed assets of Grip Ltd and a full year's depreciation had been provided thereon at 20% on cost.

You are required to show how the above items would be reflected in the consolidated balance sheet of Grip Ltd as on 31st December 1975, [illegible] 'ing year, and to pro- [illegible] the figures contained therein. 39·23

(Professional Examination—England, May 1976)

[(*Capital reserve Rs. 855 ; Minority interest Rs. 1,135 (1975) Rs. 1,545 (1974) ; Revenue reserve Rs. 21,850 (1975)*)]

12. *The following is a summary of* the balances in the books of Black Ltd and Bird Ltd as on 31st March, 1965 :

Credits :	*Black Ltd* Rs.	*Bird Ltd* Rs.
Authorised and issued capital, fully paid :		
Ordinary shares of Re. 1 each	3,00,000	1,00,000
7% Non-cumulative preference shares of Re. 1 each	—	80,000
General reserves	50,000	40,000
Profit and loss account	98,500	44,400
Provision for depreciation of fixed assets	60,000	30,000
6% Debentures	—	20,000
[illegible]	30,000	10,000
[illegible]	—	5,600
[illegible]	—	1,20[illegible]

Creditors	87,000	32,200
	Rs. 6,25,500	3,63,400

Debits :	*Black Ltd* Rs.	*Bird Ltd* Rs.
Fixed assets at cost	2,50,000	2,20,000
75,000 ordinary shares in Bird Ltd at cost	1,65,000	—
Rs. 5,000 6% debentures of Bird Ltd	5,000	—
60,000 Preference shares in Bird Ltd at cost	60,000	—
Current assets	1,45,500	1,43,400
	6,25,500	3,63,400

You ascertain the following :

(1) Black Ltd acquired the shares in Bird Ltd cum-dividend, on 31st March 1964.

(2) The general reserve of Bird Ltd was the same on 31st March, 1964, as on 31st March, 1965.

The balance on the profit and loss account of Bird Ltd is made as follows :

	Bird Ltd Rs.
Balance on 31st March, 1964	28,000
Net profit year ended 31st March, 1965	32,000
	60,000
Less : Provision for proposed dividends	15.600
	Rs. 44,400

(3) The stock in trade of Bird Ltd on 31st March 1965, included Rs. 16,000 in respect of goods purchased from Black Ltd. These goods had been sold by Black Ltd to Bird Ltd at such a price as to give Black Ltd a profit of 20% on the invoice price.

(4) The balance on the profit and loss account of Bird Ltd on 31st March 1964, is after providing for the preference dividend of Rs. 5,600 and a proposed ordinary dividend of Rs. 5,000 both of which were subsequently paid but had been incorrectly credited to profit and loss account in the books of Black Ltd.

(5) No entries had been made in the books of Black Ltd in respect of the debenture interest due from, or the proposed dividend of Bird Ltd for the year ended 31st March, 1965.

(6) On 31st March, 1965, the authorised and issued ordinary share capital of Bird Ltd had been increased by Rs. 20,000 by capitalising part of the general reserve issuing 20,000 Re. 1 shares to

the existing shareholders in proportion to their existing holdings This transaction had not yet been shown in the books of Bird Ltd.

You are required to prepare the consolidated balance sheet of Black Ltd. and its subsidiary company Bird Ltd as on 31st March, 1965.

Workings are to be shown.

Comparative figures are not required.

(C.A. Final England, May, 1966)
(Consolidated B/S total 6,97,550 ; Goodwill Rs. 31,050 ; Minority interest Rs. 70,000)

13. You are requested to prepare from the following data the consolidated balance sheet of a group of companies :

BALANCE SHEETS
as on 31st December, 1978

	A Ltd	*B Ltd*	*C Ltd*		*A Ltd*	*B Ltd*	*C Ltd*
	Rs.	Rs	Rs.		Rs.	Rs.	Rs
Share capital	1,25,000	1,00,000	60,000	Fixed assets	28,000	55,000	37,500
Reserves	18,000	10,000	7,200	Investments (at cost)			
Profit and loss A/c	16,000	2,000	5,100	Shares in *B* Ltd	85,000	—	—
C Ltd balance	3,300	—	—	Shares in *C* Ltd	18,000	—	—
Sundry creditors	7,000	5,000	—	Shares in *C* Ltd	—	53,000	—
A Ltd balance	—	7,000	—	Stock-in-trade	12,000	—	—
				B Ltd balance	8,000	—	—
				Sundry debtors	18,000	16,000	31,500
				A Ltd balance	—	—	3,300
Rs.	1,69,300	1,24,000	72,300	Rs.	1,69,300	1,24,000	72,300

Notes regarding A Ltd and subsidiaries of A Ltd :

(*a*) The share capital of all companies is divided into shares of Rs. 100 each.

(*b*) *A* Ltd held 750 shares of *B* Ltd.

(*c*) *A* Ltd held 150 shares of *C* Ltd.

(*d*) *B* Ltd held 400 shares of *C* Ltd.

(*e*) All the investments were made on 30-6-1978.

(*f*) On the date of purchase of shares in subsidiary companies the position was as follows :

	B Ltd	*C Ltd*
	Rs.	Rs.
Reserve Fund	9,000	6,000
Profit and loss account	1,000	840
Sundry creditors	4,000	—
Fixed assets	55,000	36,840
Stock-in-trade	4,000	—
Sundry debtors, etc.	55,000	30,000

(*g*) Dividends have not been declared by any company during the year ended 31-12-1978 and neither are any proposed.

(*h*) The whole of the stock-in-trade of *B* Ltd as on 30-6-1978 (Rs. 4,000) was later sold to *A* Ltd for Rs. 4,400 and remained unsold as on 31-12-1978.

(*i*) Included in the current account of *B* Ltd is an amount of Rs. 320 being interest credited to *A* Ltd.

(j) Cash-in-transit from B Ltd to A Ltd was Rs. 1,000 as on the close of business on 31-12-1978.

14. Consolidate the following balance sheets :

Liabilities

			H	A	B
			Rs.	Rs.	Rs.
Share capital, shares of Re. 1 each fully paid up			2,00,000	1,00,000	50,00[0]
5% First mortgage debentures			—	—	55,00[0]
Capital redemption reserve fund			—	—	10,00[0]
Share premium (Premium on issue of 50,000 shares issued in payment for 75,000 shares in A Ltd)			25,000	—	—
Sundry creditors			80,000	40,000	20,000
B/P (issued to H Ltd)			—	16,000	—
Profit and loss account	*H*	*B*			
Balance on 1st Jan.	31,250	8,000			
Interim dividend from B Ltd	3,750	—			
Profit for the year to date	40,000	17,000			
	75,000	25,000	75,000	—	15,000
Less Interim dividend of 10%		10,000			
		15,000			
			3,80,000	1,56,000	1,50,000

Assets

		H	A	B
		Rs.	Rs.	Rs.
[Go]odwill at cost		3,000	18,000	—
[Lan]d and building, plant and machinery at cost		44,000	40,000	35,000
[Inv]estments at cost—				
[7]5,000 shares in A Ltd	75,000			
[2]5,000 ,, ,, B Ltd	50,000			
		1,25,000	—	—
[..]00 shares in B Ltd		—	50,000	—
[..]00 shares in X Ltd		—	—	20,000
[Stoc]k at cost		50,000	25,000	20,000
[Sund]ry debtors		90,000	5,000	35,000
[B/R] (accepted by A Ltd)		8,000	—	—
		60,000	2,000	40,000
[Profit] and loss account :				
[Bal]ance on 1st Jan.	10,000			
[Ded]uct interim dividend from B Ltd	3,750			
	6,250			
[Add]: Loss for the year	9,750			
		—	16,000	—
		3,80,000	1,56,000	1,50,000

Note : *H* Ltd had contingent liabilities in respect of (*a*) bills discounted Rs. 8,000, and (*b*) a guarantee of the debentures issued by *B* Ltd. *H* Ltd and *A* Ltd both purchased their shares in *B* Ltd on 1st Jan. of the current year. *H* Ltd purchased 75,000 shares in *A* Ltd on 1st Jan. of the previous year when the debit balance on the latter company's profit and loss account was Rs. 8,000.

(*Goodwill 36,250 ; Minority interest 55,000 ; B/S 5,03,125*)

15. Following are the particulars regarding the purchases made by *H* Ltd in its subsidiaries *A* Ltd and *B* Ltd and also by *A* Ltd in *B* Ltd.

	Profit existing on the date of purchase *A Ltd*	Profit existing on the date of purchase *B Ltd*
Apri. 1, 1969 *H* Ltd purchased 60% of share holdings of *B* Ltd		Rs. 1,000 (Dr.)
Sept. 1, 1969 *A* Ltd purchased 10% of share holdings of *B* Ltd		Rs. 600 (Dr.)
Nov. 1, 1969 *H* Ltd purchased 80% of share holdings of *A* Ltd	Rs. 2,000 (Cr.)	

You are required to prepare a statement showing (*i*) minority interest in the profits ; (*ii*) holding company's share in pre-acquisition profit ; and (*iii*) holding company's share in post-acquisition profit. You have been given that total profits on 31st December, 1969 (date of consolidation) were :

A Ltd	Rs. 3,000 (Cr.)
B Ltd	Rs. 2,400 (Cr.)

(*Minority interest Rs. 1,380 ; pre-acquisition profit Rs. 940 ; Post-acquisition profit Rs. 3,080*)

16. The final sections of the profit and loss accounts of *A* Ltd, *B* Ltd, and *C* Ltd, for the year ended 31st December, 1974 are as follows :

A LTD

	Rs.		Rs.
Proposed dividend	20,000	Net profit for 1974	24,600
Balance carried forward	14,000	Balance on 31-12-73	9,400
	Rs. 34,000		Rs. 34,000

B LTD

	Rs.		Rs.
Balance carried forward	10,000	Net profit for 1974	8,000
		Balance on 31-12-73	2,000
	10,000		10,000

C LTD

	Rs.		Rs.
Net loss for 1974	1,400	Balance on 31-12-73	1,700
Balance carried forward	300		
	Rs. 1,700		Rs. 1,700

A Ltd acquired the whole share capital of *C* Ltd on 31-12-73 and
... capital of *B* Ltd on 31st December, 1972.

(j) Cash-in-transit from B Ltd to A Ltd was Rs. 1,000 as on close of business on 31-12-1978.

14. Consolidate the following balance sheets :

Liabilities

			H	A	B
			Rs.	Rs.	Rs.
Share capital, shares of Re. 1 each fully paid up			2,00,000	1,00,000	50,0
5% First mortgage debentures			—	—	55,0
Capital redemption reserve fund			—	—	10,0
Share premium (Premium on issue of 50,000 shares issued in payment for shares in *A* Ltd)	75,000				
Sundry creditors			25,000	—	—
B/P (issued to *H* Ltd)			80,000	40,000	20,000
Profit and loss account			—	16,000	—
	H	*B*			
Balance on 1st Jan.	31,250	8,000			
Interim dividend from *B* Ltd	3,750	—			
Profit for the year to date	40,000	17,000			
	75,000	25,000	75,000	—	15,000
Less Interim dividend of 10%		10,000			
		15,000			
			3,80,000	1,56,000	1,50,000

Assets

		H	A	B
		Rs.	Rs.	Rs.
oodwill at cost		3,000	18,000	—
and and building, plant and machinery at cost		44,000	40,000	35,000
vestments at cost—				
75,000 shares in *A* Ltd	75,000			
25,000 ,, ,, *B* Ltd	50,000			
		1,25,000	—	—
000 shares in *B* Ltd		—	50,000	—
000 shares in *X* Ltd		—	—	20,000
ck at cost		50,000	25,000	20,000
dry debtors		90,000	5,000	35,000
(accepted by *A* Ltd)		8,000	—	—
k		60,000	2,000	40,000
t and loss account :				
lance on 1st Jan.	10,000			
duct interim dividend from *B* Ltd	3,750			
	6,250			
: Loss for the year	9,750			
		—	16,000	—
		3,80,000	1,56,000	1,50,000

Note: *H* Ltd had contingent liabilities in respect of (*a*) bills discounted Rs 8,000 and (*b*) a guarantee of the debentures issued by *B* Ltd.

of the

. of the previous year when the debit balance on the latter company's profit and loss account was Rs 8,000

(*Goodwill 36,250 ; Minority interest 55,000 ; B/S 3,03,125*)

15. Following are the particulars regarding the purchases made by *H* Ltd in its subsidiaries *A* Ltd and *B* Ltd and also by *A* Ltd in *B* Ltd.

	Profit existing on the date of purchase	
	A Ltd	*B Ltd*
April 1, 1969 *H* Ltd purchased 60% of share holdings of *B* Ltd		Rs 1,000 (Dr.)
Sept. 1, 1969 *A* Ltd purchased 10% of share holdings of *B* Ltd		Rs. 600 (Dr.)
Nov. 1, 1969 *H* Ltd purchased 80% of share holdings of *A* Ltd	Rs 2,000 (Cr.)	

You are required to prepare a statement showing (*i*) minority interest in the profits ; (*ii*) holding company's share in pre-acquisition profit ; and (*iii*) holding company's share in post-acquisition profit. You have been given that total profits on 31st December, 1969 (date of consolidation) were .

A Ltd	Rs. 3,000 (Cr.)
B Ltd	Rs. 2,400 (Cr.)

(*Minority interest Rs 1,380 ; pre-acquisition profit Rs. 940 ; Post-acquisition profit Rs. 3,080*)

16. The final sections of the profit and loss accounts of *A* Ltd, *B* Ltd, and *C* Ltd, for the year ended 31st December, 1974 are as follows :

A LTD

	Rs		Rs
Proposed dividend	20,000	Net profit for 1974	24,600
Balance carried forward	14,000	Balance on 31-12-73	9,400
	Rs. 34,000		Rs. 34,000

B LTD

	Rs.		Rs
Balance carried forward	10,000	Net profit for 1974	8,000
		Balance on 31-12-73	2,000
	10,000		10,000

C LTD

	Rs		Rs.
Net loss for 1974	1,400	Balance on 31-12-73	1,700
Balance carried forward	300		
	Rs. 1,700		Rs. 1,700

A Ltd acquired the whole share capital of *C* Ltd on 31-12-73 and three-quarters of the share capital of *B* Ltd on 31st December, 1972.

The balance of Rs. 2,000 on profit and loss account of *B* Ltd at 31st December, 1973 represents a credit balance of Rs. 1,200 brought forward from 1972 and a net profit Rs. 800 in 1973.

No dividend has been paid by either *B* Ltd or *C* Ltd, since the holding company acquired the shares.

You are required to prepare the final section of the consolidated profit and loss account of *A* Ltd, for the year ended 31st December 1974.

(Institute of Coy Secritaries April, 1975)

[(*i*) *Revenue profits : A Ltd Rs. 19,200 ; B Ltd 8,800 ; C Ltd 1,400.*
(*ii*) *Capital profits : B Ltd Rs. 1,200 : C Ltd 1,700*)]

17. From the balance sheets and information given below, prepare consolidated balance sheet of *A* Ltd, and its subsidiaries :

As on 31st December 1975
(Rs. in lakhs)

Liabilities	*A* Ltd Rs.	*B* Ltd Rs.	*C* Ltd Rs.	*Assets*	*A* Ltd Rs.	*B* Ltd Rs.	*C* Ltd Rs.
Equity share capital (Rs. 100 fully paid)	150	100	20	Net fixed assets	280	175	25
				Investments at cost :			
Reserve and surplus	125	45	—	60,000 Shares of *B* Ltd	90	—	—
Secured loans	200	100	10	20,000 „ „ *C* Ltd	—	10	—
Unsecured loans—				Current assets :			
(*i*) From *A* Ltd		25	15	Due from subsidiaries	55	5	
(*ii*) From others	75	25	—	Other sundry assets	345	245	45
Current liabilities and provisions :				*Profi & loss account*			5
(*i*) Due to *A* Ltd	—	15	—				
(*ii*) Due to others	220	125	30				
Total	770	435	75	Total	770	435	75

(*a*) *A* Ltd acquired the shares of *B* Ltd several years ago when the reserves and surplus of the latter stood at Rs. 25 lakhs.

(*b*) The shares of *C* Ltd were acquired by *B* Ltd when the book value of the former's equity was Rs. 5 lakhs.

(*c*) Sundry assets of *B* Ltd include a portion of stock-in-trade purchased from *C* Ltd, for Rs. 9 lakhs. Goods supplied by *C* Ltd, to its holding company were invoiced at cost plus 12·5 per cent thereon.

(*d*) A remittance of Rs. 5 lakhs by *B* Ltd, to its subsidiary, remained unaccounted in the books of the latter, since the same has not been realised by its bankers till the close of the accounting year.

(*e*) The provisions made by *A* Ltd and *B* Ltd include an amount of Rs. 15 lakhs and Rs. 11 lakhs respectively for proposed dividends. (Tax implications may be ignored.) **39·22**

(C.A. Final May 1976)

(*Cost of control/goodwill Rs. 20,00,000 : Total of balance sheet 11,39,000*)

18. Alpha Ltd acquired 75% of the shares of Beta Ltd whose last available balance sheet on 31st March 1974, stood as follows :

	Rs.		Rs.
Share capital :		Fixed assets	22,00,000
20,000 shares of Rs. 100 each	20,00,000	Current assets	6,00,000
General reserve	4,00,000		
Profit and loss A/c	1,00,000		
Sundry creditors & bills payable	3,00,000		
Rs.	28,00,000	Rs.	28,00,000

The purchase was effected by issuing 11 shares of Rs. 100 each in Alpha Ltd for every 10 shares of Beta Ltd taking into consideration the fact, which was not adjusted in the books of either company, that the fixed assets of Beta Ltd were over valued by Rs. 3,00,000.

Both Beta Ltd and Alpha Ltd acquired the shares in Sine Ltd to advance the group interests on the basis of the balance sheet of Sine Ltd which on 31st March 1974 was as under :

	Rs.		Rs.
Share capital :		Goodwill	1,00,000
10,000 shares of Rs 10 each	1,00,000	Land & buildings	5,00,000
General reserve	30,000	Other assets	50,000
Profit & loss account	20,000		
Sundry creditors	5,00,000		
	6,50,000		6,50,000

Alpha Ltd acquired 7,500 shares and Beta Ltd the rest of the holding by paying Rs. 12 per share. Goodwill of Sine Ltd is of no value.

The balance sheets of the three companies as on 31st March 1975 stood as under :

Liabilities	*Alpha* Rs.	*Beta* Rs.	*Sine* Rs.
Share capital			
50,000 shares of Rs. 100 each	50,00,000		
20,000 shares of Rs. 100 each		20,00,000	
10,000 shares of Rs. 10 each			1,00,000
General reserves	5,00,000	4,00,000	30,000
Profit and loss account : (inclusive of current profits of Rs. 7·5 lakhs of Alpha Ltd)	10,00,000	1,75,000	95,000
Sundry creditors	5,50,000	3,50,000	4,00,000
	70,50,000	29,25,000	6,25,000

Assets	*Alpha* Rs.	*Beta* Rs.	*Sine* Rs.
Goodwill	5,00,000	—	1,00,000
Fixed assets including land & buildings	41,00,000	22,00,000	5,00,000
Investments at cost :			
Shares in Beta Ltd at cost	16,50,000	—	—

Shares in Sine Ltd	90,000	30,000	—
Current assets	7,10,000	6,95,000	25,000
	70,50,000	29,25,000	6,25,000

The following additional information is also furnished.

1: Current assets of Alpha Ltd include a portion of stock-in-trade purchased from Beta Ltd for Rs. 25,000 on which Beta Ltd had made a profit of 25%.
2. Cash of Rs. 5,000 was in transit from Sine Ltd to Beta Ltd.
3. Assume that profits had accrued uniformly throughout the year.
4. Alpha Ltd acquired its holdings in Beta Ltd on 1st June 1974 and both these companies acquired shares in Sine Ltd on 1st October 1974.

You are required to prepare a consolidated balance sheet as at 31st March 1975, of Alpha Ltd and its subsidiaries. 39·13

(C.A. Final November, 1975]

(Consolidated balance sheet total Rs. 84,49,375)

19. Below is given balance sheets of Rich Ltd, Poor Ltd, and Solvent Ltd as at 30th June 1974.

	Rich Ltd Rs.	*Poor Ltd* Rs.	*Solvent Ltd* Rs.
Fixed assets (at cost less depreciation)	2,00,000	2,50,000	2,00,000
Investments :			
3,[illegible]0 Equity shares in Poor Ltd	3,50,000		
[illegible],500 Equity shares in Solvent Ltd	2,00,000		
400 Equity shares in Poor Ltd			45.000
Current assets :			
Debtors	20,000	90,000	40,000
Stock	20,000	70,000	50,000
Cash and bank balance	10,000	1,65,000	45,000
	8,00,000	5,75,000	3,80,000
Equity share capital (Rs. 100 each)	5,00,000	4,00,000	2,50,000
Profit and loss A/c	2,50,000	1,00,000	30,000
Current liabilities :			
Sundry creditors	46,000	67,000	80,000
Bills payable	4,000	8,000	20,000
	8,00,000	5,75,000	3,80,000

Additional Information

(*a*) Profit and loss A/c of Poor Ltd includes Rs. 25,000 as pre-acquisition profits, the balance representing post-acquisition profits.

account for the year ended 31st December 1970, suitable for incorporation in the published accounts of *A* Ltd which will not include a separate profit and loss account for the holding company. Working should be submitted.

		A Ltd Rs.		*B Ltd* Rs.
Profit and loss account balance at 1st January 1970		36,000		15,000
Trading profit		71,000		40,000
Dividends (gross) from *B* Ltd preference		5,400		
Ordinary		7,500		
	Rs.	1,19,900		55,000
Depreciation		12,000		4,000
Debenture interest		10,000		
Taxation		22,000		15,000
Director's emoluments		7,000		3,000
Dividends paid : Date of payment				
6% preference : 30th June				3,000
31st December				3,000
Ordinary :				
Interim 30th June		12,000		5,000
Final 31st December		12,000		5,000
Profit and loss account balance at 31st December 1970		44,900		17,000
	Rs.	1,19,900	Rs.	55,000

The following information relates to share capital :

		A Ltd	*B Ltd*
Ordinary shares of Re. 1 each fully paid	Rs.	4,00,000	2,00,000
6% preference shares of Re. 1 each fully		...	1,00,000
Shares in *B* Ltd held by *A* Ltd :			
Ordinary shares acquired 1st July 1970			1,50,000
Preference shares acquired 1st January, 1970			90,000

Income and expenditure are deemed to accrue evenly throughout the year. All dividends are payable out of the current year's profits. The directors of *B* Ltd resigned on 1st July 1970, and were replaced on that day by directors of *A* Ltd who are to receive the same remuneration as the former directors.

(I.C.W.A. England June 1971)

(*Balance carried forward* : *A Ltd 41,150* ; *B Ltd 750* ; *Total 41,900*)

ASSIGNMENT MATERIAL

Objective type questions

I State whether the following statements are 'True' or 'False'.

1. Every holding company is required to present a consolidated balance sheet under the Companies Act, 1956.

2. Minority interest shown in the consolidated balance sheet is the equity held by the outsiders in the subsidiary company.

3. Cost of control is the excess price paid for the investment over and above the proportionate share of the net assets acquired by the holding company.

4. There is need to show the inter-company dividends in the consolidated profit and loss account.

5. Profit on the revaluation of fixed assets of subsidiary at the time of acquisition is a revenue profit and is credited to profit and loss account.

6. Issue of bonus shares out of pre-acquisition profit by the subsidiary company has no effect on the accounting treatment.

7. No holding company can become the subsidiary of another company.

8. The financial year of the holding company and the subsidiar company must be the same.

9. In the case of a vertical group the holding company does no consider the sub-subsidiary for the purpose of consolidation.

10. When a holding company has more than one subsidiary, it open an investment account in respect of each such subsidiary.

11. For calculating minority interest there is need to distinguish between capital and revenue profits of the subsidiary.

II. Fill in the blanks :

1. The parent organisation acquiring controlling interest in another company is called the .. .. company.

2. While preparing a consolidated balance sheet investment of the holding company in the equity shares of the subsidiary is replaced by the .... and . ... of the subsidiary.

3. While preparing the consolidated balance sheet common transactions should be ....

4. Issue of bonus shares out of post-acquisition profits by the [illegible] sidiary company has the effect of .. . the paid-up value of [illegible] and .. .. the cost of goodwill of the holding company [illegible]

5. The dividend declared by the subsidiary but not [illegible] the holding company is .... from the consolidated [illegible]

6. Dividends paid out of pre-acquisition profits [illegible] .... account by the holding company.

7. For acquiring a controlling interest the [illegible] possess more than .. .. of the equity share [illegible]

8. A company has to acquire [illegible] in order to become a holding company

III. *Indicate the correct answer :*

1. Holding company's share of losses in the subsidiary incurred after the date of acquisition is

    (*a*) a revenue loss
    (*b*) capital loss
    (*c*) None of the above.

2. For recording the long-term investments in associated companies IASC has recommended

    (*a*) equity method
    (*b*) market price method
    (*c*) cost price method.

3. A company in which the investment is substantial (although not more than 50%) and the investor company is in a position to exercise significant influence in the investee company is called

    (*a*) an associated company
    (*b*) a subsidiary company
    (*c*) a trust company.

4. To become the holding company it must acquire another company's

    (*a*) equity shares
    (*b*) preference shares
    (*c*) convertible bonds.

5. The unrealised profit on inter-company transactions is eliminated in respect of

    (*a*) minority share
    (*b*) holding company s share
    (*c*) minority shareholders and holding company proportionately.

6. The cut-off date for the distinction between the capital and revenue profits of a subsidiary is the

    (*a*) balance sheet date of the holding company
    (*b*) balance sheet data of the subsidiary company
    (*c*) date of acquisition by holding company.

7. The dividends received from the subsidiary from out of pre-acquisition profits are to be credited by a holding company to

    (*a*) the investment account
    (*b*) the profit and loss account
    (*c*) the general reserve account.

SUGGESTED READING

1. *Structure of Consolidated Accounting*—Kenneth Jaeger
2. *Accountancy*—William Pickles
3. *Modern Advanced Accounting*—Walter Meigs & Others
4. IAS-3—Consolidated Financial Statements.
5. *Advanced Accounting*—Floyd Beans

ACCOUNTING FOR MANAGEMENT

Nature and Limitations of Financial Statements

FINANCIAL STATEMENTS

Financial statements are prepared for the purpose of *presenting a periodical review or report* on the progress by the management and deal with the (*i*) *status of the investments* in the business, and (*ii*) *results achieved* during the period under review.*

The term *financial statements* as used in accounting refers to at least two statements which the accountant prepares at the end of a given period of time for the business enterprise. These statements are : (*i*) profit and loss account, and (*ii*) balance sheet. Balance sheet is prepared with a view to show the financial position as on a particular date – the date on which books are balanced and closed and accounts are prepared. The purpose of profit and loss account is to ascertain the net result of trading activities, say, for a year, as the loss or gain will affect owner's equity. In the words of Harry G. Guthmann "the balance sheet might be described as financial cross-sections taken at certain intervals and the earnings statements as condensed history of the growth or decay between the cross-sections." In the case of a limited company financial statements also include "Profit and Loss Appropriation Account". Sometimes, the term also includes in its fold the "Statement of Sources and Uses of Funds".†

(I) Balance Sheet

(*i*) **Balance sheet as a sheet of balances.** The balance sheet, strictly speaking, is a sheet which discloses the names of all those accounts which show balances. Thus balance sheet has no room for such accounts which have no balances, e.g., purchases, sales, stock at the start, salaries, wages, commission, advertisement, and so on. At the end of accounting period all these accounts are transferred to trading and profit and loss account and then closed. They do not show any balances and hence do not appear in the balance sheet. [illegible] furniture, debtors, creditors, capital account [illegible] They are not transferred to profit and loss account [illegible] same [illegible] They are, therefore, shown in the balance sheet. [illegible] the amounts shown [illegible] account [illegible]

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* AICPA : *Examination of Financial Statements by Independent Public Accountants*, p. 1.

† The term [illegible] been devoted to it.

and debentures account, preliminary expenses account are not transferre in full to profit and loss account of one year. They are spread over tw or three years. In such a case, these accounts keep on showing som balances and thus keep on appearing in the balance sheet until they ar fully written off.

(*ii*) **Balance sheet as a statement of assets and liabilities.** The shee of balances (balance sheet) is divided into two equal parts just in the wa we do for preparing a 'T' shape account. On the left side of this shee are shown such accounts which have credit balances and that on th right-hand side which have debit balances. The left-hand side is calle the "liabilities" side and the right-hand one the "assets" side. Sinc balance sheet (also called position statement or statement of financia position) exhibits assets and liabilities, it is often defined as a statemen of assets and liabilities. To make the balance sheet more meaningful t the reader, the assets and liabilities are grouped differently from thos found in the ledger accounts. The grouping of these accounts also diffe from one enterprise to another according to the nature of the busines For example, the arrangement of assets in a manufacturing entity is i the order of permanence (*i.e.*, Goodwill, Land, Building, Machiner Furniture, Prepaid expenses, Stock-in-trade, Debtors, Bills receivabl Cash at bank, Cash in hand) ; in a banking business in the order o liquidity (Cash in hand, Cash at bank, Money at call and short notic Investments, Advances, Bills receivable being bills for collection, etc.) and in an insurance enterprise in the order which is neither an order o permanence nor a liquidity order (Loans, Investments, Agents' balance Outstanding premium, Interest, Dividends, Rents outstanding, etc).

(*iii*) **Balance sheet as a *statement of sources and uses of capita*** The balance sheet may also be described as a statement of sources an uses of capital. The capital here has been used in a broad sense to mea the total capital of the business from whatever source it might have bee acquired. The sources of capital (owner, creditors, loans, bank ove drafts) are shown on the liabilities side and uses of the total capital (lan building, machinery, furniture, stock, etc.) on the assets side. In oth words, all liabilities are sources and all assets are uses. It must be r membered that cash balance (being an asset) is also an use. Since us of capital in the business must be equal to the sources of capital, the tota on the two sides of a balance sheet must be equal. This approach to t balance sheet emphasises that it is not and does not purport to be statement of value ; *it is only a listing of the sources and investments capital.*

CLASSIFICATION OF ASSETS AND LIABILITIES

This can best be done through a balance sheet which displays t assets and liabilities in a systematic manner. A perusal of any balan sheet would reveal that these items fall into two sections One—tho items which are frequently changing their form otherwise known current assets and liabilities and two—the remaining items which a relatively stable and better known as fixed assets and longterm liabilit including owners' equity. Such a division of the balance sheet into t parts has some significance as is evident from the following discussion.

Current Assets and Liabilities

An excess of current assets over current liabilities is often referr

to either as 'net current assets' or 'working capital'. If, on the other hand, current liabilities exceed the current assets the difference would be termed as 'working capital deficit'. When the working capital is in deficit, the business may be faced with a technical insolvency—a situation where the business is unable to meet its obligations as they fall due. Actual insolvency is different from the technical insolvency in the sense it arises only when the assets after being realised are not sufficient to meet the liabilities in full.

The identification of current assets and current liabilities has traditionally been considered useful information to asset users of financial statements in analysing an enterprise's financial position. A short-term investor always has a special interest in the working capital portion of a business and will not be willing to advance unless there is a safe and sufficient margin between the current assets and current liabilities. So all the creditors providing short-term credit centre their attention on this portion of the balance sheet. When an organisation is established, promoters normally ensure that a portion of the working capital is provided from out of owners' funds. Otherwise it may be lead to an unsatisfactory situation of the organisation facing the problem of working capital deficit. The International Accounting Standards Committee has published International Accounting Standard (IAS 13) with regard to the presentation of current assets and liabilities and is reproduced below:

INTERNATIONAL ACCOUNTING STANDARD

(Presentation of Current Assets and Current Liabilities)

Introduction

1. This statem[illegible] presentation of current assets and c[illegible] statement does not deal [illegible] liabilities.

Explanation

2. The identification of current assets and current liabilities has traditionally been considered useful information to assist users of financial statements in analysing an enterprise's financial position.

3. An excess of current assets over current liabilities is often referred to either as "net current assets" or as "working capital".

Alternative Views of Current Assets and Current Liabilities

4. Some regard the classification of assets and liabilities into "current" and "non current" as being intended to give an approximate measure of an enterprise's liquidity, that is, its ability to carry on its activities on a day-to day basis without [illegible] financial stringencies. Others regard this classification [illegible] those resources and obligations of the [illegible] circulating.

5. These purposes are to a certain extent incompatible. This is because, in measuring liquidity, the criterion for classifying assets and liabilities as current or non-current is whether the items will be realised or liquidated in the near future. The criterion for identifying assets [illegible]

and debentures account, preliminary expenses account are not transferr in full to profit and loss account of one year. They are spread over tv or three years. In such a case, these accounts keep on showing son balances and thus keep on appearing in the balance sheet until they a fully written off.

(*ii*) **Balance sheet as a statement of assets and liabilities.** The she of balances (balance sheet) is divided into two equal parts just in the w we do for preparing a 'T' shape account. On the left side of this she are shown such accounts which have credit balances and that on t right-hand side which have debit balances. The left-hand side is call the "liabilities" side and the right-hand one the "assets" side. Sin balance sheet (also called position statement or statement of financi position) exhibits assets and liabilities, it is often defined as a stateme of assets and liabilities. To make the balance sheet more meaningful the reader, the assets and liabilities are grouped differently from the found in the ledger accounts. The grouping of these accounts also diff from one enterprise to another according to the nature of the busine For example, the arrangement of assets in a manufacturing entity is the order of permanence (*i.e.*, Goodwill. Land, Building, Machine Furniture, Prepaid expenses, Stock-in-trade, Debtors, Bills receivab Cash at bank, Cash in hand) ; in a banking business in the order liquidity (Cash in hand, Cash at bank, Money at call and short noti Investments, Advances, Bills receivable being bills for collection, etc and in an insurance enterprise in the order which is neither an order permanence nor a liquidity order (Loans, Investments, Agents' balanc Outstanding premium, Interest, Dividends, Rents outstanding, etc).

(*iii*) **Balance sheet as a statement of sources and uses of capit** The balance sheet may also be described as a statement of sources a uses of capital. The capital here has been used in a broad sense to me the total capital of the business from whatever source it might have be acquired. The sources of capital (owner, creditors, loans, bank ov drafts) are shown on the liabilities side and uses of the total capital (lai building, machinery, furniture, stock, etc.) on the assets side. In otl words, all liabilities are sources and all assets are uses. It must be membered that cash balance (being an asset) is also an use. Since u of capital in the business must be equal to the sources of capital, the tot on the two sides of a balance sheet must be equal. This approach to balance sheet emphasises that it is not and does not purport to b statement of value ; *it is only a listing of the sources and investments capital.*

CLASSIFICATION OF ASSETS AND LIABILITIES

This can best be done through a balance sheet which displays assets and liabilities in a systematic manner. A perusal of any balai sheet would reveal that these items fall into two sections One—th items which are frequently changing their form otherwise known current assets and liabilities and two—the remaining items which relatively stable and better known as fixed assets and longterm liabili including owners' equity. Such a division of the balance sheet into t parts has some significance as is evident from the following discussion.

Current Assets and Liabilities

An excess of current assets over current liabilities is often refer

to either as 'net current assets' or 'working capital'. If, on the other hand, current liabilities exceed the current assets the difference would be termed as 'working capital deficit'. When the working capital is in deficit, the business may be faced with a technical insolvency—a situation where the business is unable to meet its obligations as they fall due. Actual insolvency is different from the technical insolvency in the sense it arises only when the assets after being realised are not sufficient to meet the liabilities in full.

The identification of current assets and current liabilities has traditionally been considered useful information to asset users of financial statements in analysing an enterprise's financial position. A short-term investor always has a special interest in the working capital portion of a business and will not be willing to advance unless there is a safe and sufficient margin between the current assets and current liabilities. So all the creditors providing short-term credit centre their attention on this portion of the balance sheet. When an organisation is established, promoters normally ensure that a portion of the working capital is provided from out of owners' funds Otherwise it may be lead to an unsatisfactory situation of the organisation facing the problem of working capital deficit. [illegible] Standards Committee has published Inter- [illegible] the presentation of [illegible]

INTERNATIONAL ACCOUNTING STANDARD

(Presentation of Current Assets and Current Liabilities)

Introduction

1. This statement deals with the meaning and presentation of current assets and current liabilities in financial statements. This statement does not deal with the basis of valuation of these assets and liabilities.

Explanation

2. The identification of current assets and current liabilities has traditionally been considered useful information to assist users of financial statements in analysing an enterprise's financial position.

3 An excess of current assets over current liabilities is often referred to either as "net current assets" or as "working capital".

Alternative Views of Current Assets and Current Liabilities

4. Some regard the classification of assets and liabilities into "current" and "non current" as being intended to give an approximate measure of an enterprise's liquidity, that is, its ability to carry on its activities on a day-to day basis without encountering financial stringencies Others regard this classification as providing an identification of those resources and obligations of the enterprise that are continuously circulating

5. These purposes are to a certain extent incompatible This is because, in measuring liquidity, the criterion for classifying assets and liabilities as current or non-current is whether the items will be realised or liquidated in the near future. The criterion for identifying assets and

liabilities as circulating, however, is whether they are consumed or sett in the production of revenue within the normal operating cycle* of enterprise. For example, construction work-in-progress would, und the first criterion, be largely excluded from current assets, while und the second criterion it would be included.

Present Practice

6. These competing considerations have led to the adoption i many countries of a position whereby items are included in current asset on the basis of whether they are expected to be realised within one yea or within the normal operating cycle of the enterprise, whichever is the longer; items are included in current liabilities if they are payable at the demand of the creditor or are expected to be liquidated within one year. Even when this approach is used as the general rule, there are instances of the inclusion or exclusion of individual items based on different criteria. Hence, the classification of items as current or non-current in practice is largely based on convention rather than on any one concept. The present practice as to the classification of current assets and current liabilities is given below.

Items Included in Current Assets

7. Cash and bank balances are included in current assets unless restrictions on their use make them unavailable for current operations.

8. Trade and other receivables are included in current assets to the extent that they are expected to be realised within one year. Sometimes all trade receivables are included in current assets, in which case the amount not expected to be realised within one year may be disclosed.

9. Inventories are usually included in current assets in their entirety, notwithstanding that they may include items not expected to be realised within one year or within the normal operating cycle.

Items Included in Current Liabilities

10. A loan stated to be payable at the demand of the creditor is usually included in current liabilities. However, if the creditor has agreed to a schedule of repayment, the loan is sometimes classified on the basis of scheduled repayment, notwithstanding the creditor's right to demand repayment at any time.

11. The portion of a long-term liability payable within one year is usually classified as a current liability. This item is sometimes excluded from current liabilities if the enterprise intends to refinance the obligation on a long-term basis and there is reasonable assurance that the enterprise will be able to do so. Similarly, the portion of a long term liability payable within one year is sometimes classified as non-current if assets existing at the balance sheet date, out of which settlement is to be made, have been excluded from current assets.

When an enterprise excludes a liability from the current classification in accordance with paragraph 11, the amount and the circumstances are often disclosed.

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*The operating cycle of an enterprise normally refers to the average time between the acquisition of materials entering into the process and the final cash realisation.

Presentation in the Financial Statements

13. The usefulness of the current : non-current distinction is improved by grouping and totalling current assets and current liabilities.

14. To permit adequate identification of the separate assets and liabilities of the enterprise, the amount at which a current asset or current liability is stated is generally not reduced by deducting another current [illegible]

Limitations of the Current : Non-Current Distinction

15. The current non-current distinction is generally believed to provide an identification of a relatively liquid portion of an enterprise's total capital that constitutes a margin or buffer for meeting obligations within the ordinary operating cycle of an enterprise. However, as long as a business is a going concern, it must, for example, continuously replace the inventory that it realises with new inventory in order to carry on its operations. Also, current assets may include inventories that are not expected to be realised in the near future. On the other hand, many enterprises finance their operations with bank loans that are stated to be payable on demand and are hence classified as current liabilities. Yet, the demand feature may be primarily a form of protection for the lender and the expectation of both borrower and lender is that the loan will remain outstanding for some considerable period of time.

16. [illegible] excess of current assets over current liabilities [illegible] an enterprise, [illegible] regarded as an indication of financial problems. It is not appropriate to draw such conclusions without considering the nature of the operations of the enterprise and the individual components of its current assets and current liabilities.

17. The segregation of assets and liabilities between current and non-current is usually not considered appropriate in the financial statements of enterprises with indeterminate or very long operating cycles.

18. Thus, while many believe that the identification of current assets and liabilities is a useful tool in financial analysis, others believe that the limitations of the distinction make it of little use or even misleading in many circumstances. Imposition of a general requirement to identify current assets and liabilities in financial statements might impede further consideration of these questions. Accordingly, this Statement is intended only to harmonise practices followed by enterprises that choose to identify current assets and liabilities in their financial statements.

INTERNATIONAL ACCOUNTING STANDARD 13

(Presentation of Current Assets and Liabilities)

International Accounting Standard 13 comprises paragraphs 19-28 of this Statement. The Standard should be read in the context of paragraphs [illegible] *of the Statement and of the Preface to Statements of International Acc*[illegible] *Standards.*

19. Each enterprise should determine [illegible] current assets and current liabilities as sep[illegible]

liabilities as circulating, however, is whether they are consumed or settled in the production of revenue within the normal operating cycle* of an enterprise. For example, construction work-in-progress would, under the first criterion, be largely excluded from current assets, while under the second criterion it would be included.

Present Practice

6. These competing considerations have led to the adoption in many countries of a position whereby items are included in current assets on the basis of whether they are expected to be realised within one year or within the normal operating cycle of the enterprise, whichever is the longer ; items are included in current liabilities if they are payable at the demand of the creditor or are expected to be liquidated within one year. Even when this approach is used as the general rule, there are instances of the inclusion or exclusion of individual items based on different criteria. Hence, the classification of items as current or non-current in practice is largely based on convention rather than on any one concept. The present practice as to the classification of current assets and current liabilities is given below.

Items Included in Current Assets

7. Cash and bank balances are included in current assets unless restrictions on their use make them unavailable for current operations.

8. Trade and other receivables are included in current assets to the extent that they are expected to be realised within one year. Sometimes all trade receivables are included in current assets, in which case the amount not expected to be realised within one year may be disclosed.

9. Inventories are usually included in current assets in their entirety, notwithstanding that they may include items not expected to be realised within one year or within the normal operating cycle.

Items Included in Current Liabilities

10. A loan stated to be payable at the demand of the creditor is usually included in current liabilities. However, if the creditor has agreed to a schedule of repayment, the loan is sometimes classified on the basis of scheduled repayment, notwithstanding the creditor's right to demand payment at any time.

11. The portion of a long-term liability payable within one year is usually classified as a current liability. This item is sometimes excluded from current liabilities if the enterprise intends to refinance the obligation on a long-term basis and there is reasonable assurance that the enterprise will be able to do so. Similarly, the portion of a long term liability payable within one year is sometimes classified as non-current if assets existing at the balance sheet date, out of which settlement is to be made, have been excluded from current assets.

12. When an enterprise excludes a liability from the current classification in accordance with paragraph 11, the amount and the circumstances are often disclosed.

* The operating cycle of an enterprise normally refers to the average time between the acquisition of materials entering into the process and the final cash realisation.

Presentation in the Financial Statements

13. The usefulness of the current : non-current distinction is improved by grouping and totalling current assets and current liabilities

14. To permit adequate identification of the separate assets and liabilities of the enterprise, the amount at which a current asset or current liability is stated is generally not reduced by deducting another current liability or current asset. [illegible] when a legal right of set-[illegible] tion as to the realisation [illegible]

Limitations of the Current : Non-Current Distinction

15. The current : non-current distinction is generally believed to provide an identification of a relatively liquid portion of an enterprise's total capital that constitutes a margin or buffer for meeting obligations within the ordinary operating cycle of an enterprise. However, as long as a business is a going concern, it must, for example, continuously replace the inventory that it realises with new inventory in order to carry on its operations. Also, current assets may include inventories that are not expected to be realised in the near future. On the other hand, many enterprises finance their operations with bank loans that are stated to be payable on demand and are hence classified as current liabilities Yet, the demand feature may be primarily a form of protection for the lender and the expectation of both borrower and lender is that the loan will remain outstanding for some considerable period of time.

1[illegible] current liabilities [illegible] of an enterprise, [illegible] regarded as an indication of financial problems. It is not appropriate to draw such conclusions without considering the nature of the operations of the enterprise and the individual components of its current assets and current liabilities.

17. The segregation of assets and liabilities between current and non-current is usually not considered appropriate in the financial statements of enterprises with indeterminate or very long operating cycles

18. Thus, while many believe that the identification of current assets and liabilities is a useful tool in financial analysis, others believe that the limitations of [illegible] many circum[illegible] current assets [illegible] consideration [illegible] only to harmonise practices followed by enterprises that choose to identify current assets and liabilities in their financial statements.

INTERNATIONAL ACCOUNTING STANDARD 13

(Presentation of Current Assets and Liabilities)

International Accounting Standard 13 comprises paragraphs 19-28 of this Statement. The Standard should be read in the context of paragraphs 1-18 of the Statement and of the Preface to Statements of International Accounting Standards.

19. Each enterprise should determine whether or not to present current assets and current liabilities as separate classifications in its

nancial statements. Paragraphs 21—27 of this Standard apply when he current : non-current distinction is made.

20. When the current : non-current distinction is not made in the nancial statements of an enterprise, no sub totals of the amounts of ssets and of liabilities should be given that would imply that such istinction is made.

APPLICATION OF THE CURRENT : NON-CURRENT DISTINCTION

Current Assets

21. Among the items included in current assets should be :

(*a*) Cash and bank balances available for current operations. Cash or bank balance whose use for current operations is subject to restrictions should be included as a current asset only if the duration of the restrictions is limited to the term of an obligation that has been classified as a current liability or if the restrictions lapse within one year.

(*b*) Securities not intended to be retained and capable of being readily realised.

(*c*) Trade and other receivables expected to be realised within one year of the balance sheet date. Trade receivables may be included in their entirety in current assets, provided that the amount not expected to be realised within one year is disclosed.

(*d*) Inventories.

(*e*) Advance payments on the purchase of current assets.

(*f*) Expense prepayments expected to be used up within one year of the balance sheet date.

Current Liabilities

22. Among the items included in current liabilities should be obligations payable at the demand of the creditor and those parts of the following obligations whose liquidation is expected within one year of the balance sheet date :

(*a*) Bank and other loans. If a loan is repayable in accordance with a schedule of repayment agreed with the creditor, the loan may be classified in accordance therewith, notwithstanding a right of the creditor to demand current payment.

(*b*) The current portion of long-term liabilities, unless excluded under the provisions of Paragraph 23.

(*c*) Trade liabilities and accrued expenses.

(*d*) Provision for taxes payable (see International Accounting Standard 12, Accounting for Taxes on Income).

(*e*) Dividends payable.

(*f*) Deferred revenues and advances from customers.

(*g*) Accruals for contingencies (see International Accounting Standard 10, Contingencies and Events Occurring after the Balance Sheet date).

23. The current portion of a long-term liability may be excluded from current liabilities if the enterprise intends to refinance the obligation on a long-term basis and there is reasonable assurance that the enterprise will be able to do so. Demonstration of this ability would require either:

(a) the issue of share capital or a long-term obligation after the date of the balance sheet; or

(b) a non-cancellable financing agreement that does not expire within one year of the balance sheet date and that the lender or investor is financially capable of honouring.

24. When an enterprise excludes a liability from the current classification in accordance with Paragrph 23, the amount of the liability and the terms of the refinancing should be disclosed.

Presentation in the Financial Statements

25. The amount at which a current asset or current liability is stated in the financial statements should not be reduced by the deduction of another current liability or current asset unless a legal right of set-off exists and the off-setting represents the expectation as to the realisation of the asset or settlement of the liability.

26. Progress payments and advances may be deducted from the amount of related construction work-in-progress, provided disclosure is made in accordance with International Accounting Standard 11, Accounting for Construction Contracts.

27. The total amount of current assets and the total amount of current liabilities should be disclosed in the financial statements.

Effective Date

28. The International Accounting Standard becomes operative for financial statements covering periods beginning on or after January 1, 1981.

Fixed assets. Any asset held for the services it yields in the pro- [illegible] ... termed as fixed assets.*

Long-term liabilities or fixed liabilities All liabilities which do not become due for payment in one year and which do not require current assets** for their payment are classified as long-term liabilities or fixed liabilities.

Format of Balance Sheet. The balance sheet can be presented in two ways: (i) Horizontal presentation, and (ii) Vertical presentation. Under horizontal [illegible] side. Assets are [illegible] hand side. In the [illegible] lities on the right-hand side. [illegible] presentation of the balance sheet of a sole trader's business.

* In American usage the term "fixed assets" does not include intangibles.

** See para 23 of the International Accounting Standard 13—P[illegible]ion of current assets and current liabilities—Vide FSA-5.

Anil Brothers
BALANCE SHEET*
As on December 31, 1979

Liabilities	Rs.	*Assets*	Rs.
Current liabilities		Current assets	
Creditors	...	Cash in hand	...
Bills payable	...	Cash at bank	...
Bank loan	...	Debtors	...
Outstanding expenses	...	Bills receivable	...
Income received in advance	...	Stock-in trade	...
Fixed liabilities		Investments (give details)	
Loan	...	Fixed assets	
Mortgage	...	Furniture and fittings	...
Capital		Plant and machinery	...
Anil	...	Buildings	...
		Land	...
		Goodwill	...
Rs.	...	Rs.	...

* This is in the order of liquidity.

The vertical presentation of the balance sheet is as under* :

Mahendra & Company Ltd
BALANCE SHEET
As on December 31, 1979

	Cost	Depreciation	Net	Rs.
Uses of Funds				
Fixed Assets :				
Land	10,000	—	10,000	
Buildings	20,000	2,000	18,000	
Machinery	6,000	1,200	4,800	
Furniture	5,000	600	4,400	
				37,200
Current assets :				
Stock-in-trade			6,000	
Sundry debtors			4,000	
Bills receivable			2,000	
Cash at bank			4,000	
Cash in hand			500	
			16,500	
Less : Current liabilities :				
Sundry creditors		3,000		
Bills payable		2,800		
Outstanding expenses		1,200		
			7,000	
Net working capital				9,500
Total net assets				Rs. 46,700

* Refer also Illustration No. 96, Page 4·266 of II volume.

Sources of Funds :

Shareholders' funds :

Share capital	20,000	
Reserves	5,000	
		25,000
Loans		21,700
	Rs.	46,700

(2) Profit and Loss Account*

This is also called *profit and loss statement* or *income statement*. Profit and loss account is a very important part of financial statements inasmuch as the determination of net profit of a business enterprise is the central feature of accounting. Business is conducted primarily to earn profit. This statement matches revenues (*e.g.*, sales) and costs incurred in the process of earning revenues (*e.g.*, cost of goods sold, administration selling and distribution and other general expenses). The income statement can be *"multiple step"* income statement or *"single step"* income statement. The profit under "multiple-step" income statement is determined in various steps :

First, sales and other operating revenues are compared with the cost of goods sold to give the gross profit. (If cost of goods sold exceeds the sales revenue and other operating revenues then there will be a gross loss).

Secondly, from the gross profit other *operating expenses* (often divided into administration, selling and distribution expenses) are deducted to get operating profit.

Thirdly, to the operating profit other *non-operating* incomes are added and therefrom other non-operating expenses are deducted. The resultant figure is net profit before tax. *Non-operating incomes* arise from secondary activities; *for example*, interest, rent, and dividend received by a company whose main business is not to deal in finance, property and investments. Other expenses arise from incidental activities; for example, financing costs, such as the payment of interest.

Fourthly, the provision for tax is deducted from the net profit before tax. The result is net profit after tax.

Fifthy, other extraordinary gains or losses, *e.g.*, gain or loss on the sale of investments or loss by fire, are shown net of income taxes for arriving at the final figure of net income. An example of "multiple-step" income statement has been given in the next page.

It is said that "multiple-step" income statement is confusing In order to avoid this defect, many business houses adopt "single-step" income statement. Under this form, the first step is to collect all kinds of incomes, whether operating or non-operating, at one place. Second Step is to show all deductions from the total income as calculated in step 1, the difference being net profit or net loss. Under single-step income statement it is left to the reader to make own

* Also see *Advanced Accountancy*, Vol. I, Chapter 4.

groups to reach the desired conclusions. Following is the example of "single-step" income statement put in vertical order :

SINGLE-STEP INCOME STATEMENT

Income :		
Sales	Rs.	9,37,450
Dividends		20,685
Interest on securities		92,760
Royalties		80,000
Miscellaneous		38,920
	Rs.	11,69,815
Deductions from income :		
Cost of goods sold		3,49,600
Selling, general and administration expenses		3,80,620
Interest on debentures		1,70,000
Amortization of discount on debentures		75,270
Other interests		5,300
Loss on the sale of property		24,470
Provision for tax		1,25,400
	Rs.	11,30,660
Net income for the year	Rs.	39,155

Format of profit and loss account. Profit and loss account is prepared either in horizontal or vertical form. The horizontal form of presentation of profit and loss account is very popular though it is becoming out of date steadily. In *Advanced Accountancy*, Vol I all profit and loss accounts have been prepared in horizontal form. The presentation of profit and loss account in vertical form and "multiple-step" is as under :

Mehta Bros. Ltd

PROFIT AND LOSS ACCOUNT

For the year ended December 31, 1979

Net sales		Rs.	18,70,520
Cost of goods sold			11,44,260
(*i*) *Gross profit*			7,26,260
General and administration expenses :			
Office salaries	85,000		
Officers salaries	65,160		
Taxes	17,480		
Insurance	3,760		
Depreciation	47,960		
			2,19,360

Selling expenses :		
Sales salaries	1,36,700	
Advertising	68,560	
Travel and entertainment	18,740	
Freight and delivery	9,240	
Depreciation	15,520	
		2,48,760
Total operating expenses		Rs. 4,68,120
(ii) *Operating profit**		2,58,140
Other revenues and expenses :		
Interest and dividend earned	12,400	
Income from rent	38,800	
	51,200	
Less Interest expense	10,400	
		40,800
(iii) *Net profit before income tax*		Rs 2,98,940
Provision for income tax		1,49,470
(iv) *Net profit after income tax*		Rs. 1,49.470
Gain on sale of investments net of income tax on the gain of Rs. 9,400		8,340
(v) *Net profit*		Rs. 1,57,810

(3) Profit and Loss Appropriation Account

[illegible] utilisation of profits ea[illegible] equity and preference share capitals, the amount transferred to general reserve or development rebate rese[illegible] The balance of this a[illegible] this account has [illegible] Accounts in *Advanced Accountancy—Theory, Method and Application*, Vol. II.

(4) Statement of Sources and Uses of Working Capital

The s[illegible] changes in the working capital during a stated pe[illegible]ws sources of workin[illegible]pital. The difference in the sources and uses represents either net increase or net decrease in working capital. The details relating to the preparatio[illegible] this statement have been given in a separate chapter entitled "[illegible] Flow Statements".

NATURE OF FINANCIAL STATEMENTS

It has already been said that financial statements are prepare[illegible]

* Gross profit less operating expenses.

the purpose of presenting a *periodical review or report* on the progress b the management and deal with the (*i*) *status of the investments* in th business, and (*ii*) *results achieved* during the period under review. Th data exhibited in these financial statements are the result of the combine effect of : (*a*) recorded facts ; (*b*) accounting conventions ; and (*c*) persona judgment used in the application of accounting conventions. The impli cation and significance of the above three effects is explained below :

(*a*) Recorded facts. (*i*) The term "recorded facts" refers to th situation that the data used for preparing financial statements are draw from the accounting records. For example, figures relating to cash i hand, cash at bank, debtors, bills receivable, cost of fixed assets, bill payable, creditors, sales, purchases, wages, salaries, rent, are recorde facts.

(*ii*) The financial statements do not disclose such facts as are no recorded in the accounting books whether or not such facts are material The market value or the replacement cost of a fixed asset is not state in the balance sheet because as per the accounting records the cost pric (not the replacement cost) of the fixed asset is a recorded fact. It shoulc therefore, be clear to the reader that the balance sheet does not show th financial position of the business in terms of current economic condition because most of the items which it exhibits are shown at recorded cost which are only historical costs rather than current costs.

(*iii*) Financial statements do not show such facts as cannot be recor ded, *e.g*, health of the General Manager, relation of sales manager wit general manager.

It may, however, be noted that in an effort to make these statement more meaningful some such facts as cannot be recorded in the books ar sometimes shown in parentheses or as footnotes. Examples are marke value of investments, indication of the valuation method applied to stoc (LIFO or FIFO), description and amount of contingent liabilities, unpaic cumulative preference dividends, comments on the extraordinary gains o losses, discussion of commitments to purchase fixed assets, unfilled custo mers' orders, and guarantees. The information as disclosed in footnote or in parentheses makes the financial statements more useful.

(*b*) Accounting conventions*. The financial statements are affecte to a very great extent by accounting principles, concepts and conventions.

First, though business represents a continuous stream of transaction from day to day and year to year yet with a view to reporting its progres at comparatively short intervals its continuity is always assumed to b broken at a certain moment of time (at the interval of one year).

Secondly (as a consequence of the first assumption), in order t facilitate the process of breaking the continuous stream of business trans actions at a convenient moment of time various conventions have bee developed which are used for matching costs and revenues and for findin out the position of unexpired costs for the purpose of balance sheet.

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* Separate chapter has been given in *Advanced Accountancy—Theory, Method and Application*, Vol. I.

Thirdly, in order to facilitate the calculation of *the expired* cost relating to a fixed asset going concern concept has been devised. Because of the influence of this concept, market values of the fixed assets are ignored

Fourthly, with a view to estimate the loss on account of bad debts the shelter of convention of *conservatism* and *consistency* has been taken.

Fifthly, in order to enable the accountant to add the cost of various assets acquired at different intervals of time when the purchasing power of the rupee is different the *monetary postulate* has been devised. According to this assumption *the purchasing power of the rupee is treated* as constant (whereas actually it is not)

Sixthly, with a view to determine the precise amount of revenue for the period ending on a particular date *realisation postulates* have been devised.

[illegible] concepts and conventions provide [illegible]

the application of these concepts and conventions depends on the *personal judgment* of the accountant. For example, (i) in the application of the rule that depreciation is calculated on the book value of assets the accountant has scope of exercising *his personal judgment inasmuch* as he has the liberty to select any of the various depreciation methods It is he who has to decid[illegible] method written [illegible] balance [illegible]

Further, the accountant has the scope of applying his personal judgment in deciding the rate of depreciation Though much is regulated by the income-tax laws, the scope for his personal bias cannot be ruled out. His authority to classify the asset in a particular group itself makes the difference.

(*ii*) The personal judgement of the accountant is *exercised* when accountant *is required to* decide the method of valuing the stock in trade. Out of the various methods viz., FIFO, LIFO, Average, Standard price, he has to make a choice All accounting records are materially affected by the selection of one method in preference to other

(*iii*) The calculation of provision for doubtful debts is affected by the personal judgment of the accountant He is to decide whether it *should be at 5%* or *any other per cent.*

(*iv*) Whether a particular item should be capitalised or charged to revenue depends to a large extent on the personal judgment of the accountant

(v) Judgment is also exercised when the accountant writes off intangible assets *like heavy* development costs, goodwill, or deferred revenue expenditure items like preliminary expenses, discount on the issue of shares and debentures, heavy advertisement costs in (say) five years rather than shorter or longer period.

It is heartening to note that the existence of the *consistency* princi serves as a check on the power of the accountant to use his perso judgment Since an accountant is guided by the past practices, the a of the application of his personal judgment is reduded, For example, straight line method of depreciation is in use for a particular asset, it comes quite difficult for the accountant to change to other method depreciation without justifying the change.

LIMITATIONS OF FINANCIAL STATEMENTS

The nature of figures which are reported and the way in which t are reported tend to give the impression to the reader that financial sta ments are precise, exact and final. But this is not the case in that th statements have certain limitations :

(*i*) A balance sheet is described as a statement of all assets a liabilities. But this is not true. There are certain assets and liabili which it does not disclose. For example, the most tangible asset o company these days is its management force, which the balance sh does not disclose. Efforts are being made to quantify the human forc but the technique is still not perfect. Likewise, balance sheet does disclose a dissatisfied labour force which is a perennial liability to company.

(*ii*) The figures given in the balance sheet are on a historical ba The book value shown is based on the original cost after deduct accumulated depreciation. The technological and economic events si the date of acquisition might have changed its replacement value c siderably. Therefore, a decision to replace the asset may cause a sev financial drain affecting the liquidity of the company.

(*iii*) Accounting is done on the basis of certain conventions acco ing to one of which the assets of the company are valued on a 'go concern' basis. Some of the assets may not realise the stated values, a liquidation is forced on the company. Assets shown in the bala sheet reflect merely unexpired or unamortised costs. However, the lia lities to be settled remain at the same figure, seriously affecting the s vency of the company.

(*iv*) The balance sheet is prepared at a point of time and accounting year may be deliberately chosen in such a manner that it gi a favourable picture. For example, in the case of a highly seaso industry like sugar a balance sheet prepared during the off-season n show good liquidity position. But if the accounting date coincides w the crushing season, it will show the strain on liquidity.

(*v*) An investor who wishes to analyse the balance sheet is m concerned with the present and future, whereas the balance sheet perta to a point of time relating to past and therefore may not be qu helpful.

(*vi*) Because of the flexibility of accounting principles, certa liabilities are not provided for and to that extent balance sheet will give misleading picture. To give one example, most of the companies do make any provision for payment of gratuity.

(*vii*) Companies present their financial statements in accordance with the Schedule VI of the Companies Act. They are drawn up from the point of view of the shareholders and are perfunctory in their presentation in that they merely reveal whether the funds made available to the managemant have been satisfactorily managed. It does not in any way help the decisionmaking of the investors, creditors and workers. That is why in recent years there has been demand for more and more information to be disclosed in the published accounts to serve the interests of other users as well.

(*viii*) Personal judgment plays a great part in determining the figures for the balance sheet. Provision of depreciation, stock valuation, amounts to be set apart for bad debts are based on personal judgment and therefore not free from bias.

(*ix*) "Very occasionally, even audited balance sheets have proved to be disastrously inaccurate and misleading. Cases in the High Courts [illegible] deliberate manipulation of profits and current assets on the [illegible] closing stocks. One [illegible] the strength of such a balance sheet The subsequent failure of the company revealed the stock manipulations and the bank suffered huge losses."* Therefore *audit of accounts does not provide a complete seal of accuracy.*

(*x*) Balance sheet does not disclose information relating to changes in management, loss of markets, cessation of agreements which have a vital bearing on the earnings of the company.

[illegible] statements are based on accounting policies which [illegible] ry and among [illegible] s part of the information needed, among other purposes, for making and evaluating financial decisions. They cannot make reliable judgments on these matters unless the financial statements clearly disclose the significant accounting policies which have been adopted in preparing them.

LIMITATIONS OF PROFIT AND LOSS ACCOUNT

(*i*) Net profit is ascertained on the basis of historical costs In many companies if these profits are adjusted for inflation there may be no profit at all According to a recent study made by Shri N. Mishra**, "the continuous rise in prices had adversely affected business enterprises in the country. Their incomes are not as good as they look. They are paying taxes on capital and distributing dividend out of capital"

(*ii*) Profit reported by the profit and loss account is only interim in nature. True profit can be ascertained only after the concern has run its entire life.

(*iii*) The net income as disclosed by the profit and loss account is not absolute but relative in that this statement is the outcome of (*a*) conventions and concepts; (*b*) correct calculation of expired costs; and (*c*) correct recognition of revenue. The concepts and conventions affect-

* F. Wood: *Business Accounting*, Vol II.

** Effect of inflation on income, dividend and taxes—*Chartered Secretary*, J[illegible] 1979.

ing the calculation of income are many, the calculation of expired cost i a difficult process, and recognition of reveuue is affected by various considerations.

(*iv*) Just as balance sheet does not disclose non-financial items similarly, the profit and loss account does not reveal factors like qualit of management, loyalty of the working force, quality of the working force quality of the product, etc.

(*v*) Again as in the case of balance sheet, the net income is th result of personal judgment in such matters as depreciation, stock valuation and allocation of expenditure between capital and revenue. N doubt there are accepted principles of accounting governing these, bu bias of the accountants cannot be removed altogether.

ASSIGNMENT MATERIAL

Objective Type Questions :

1. State whether the following statements are 'True' or 'False'

(*a*) A balance sheet is a statement of assets and liabilities as on a given date.

(*b*) Reserves of a company always represent the amount which th company can readily spend.

(*c*) Balance sheet can only indicate the items which can be expressed in terms of money.

(*d*) Total capital employed by a company is the sum of shareholders funds and term liabilities.

(*e*) Security capable of being realised and not held with the intention of being retained is a current asset.

(*f*) The figures given in the balance sheet are the future estimated values of assets and liabilities.

(*g*) The accounting policies do not differ from enterprise to enterprise.

2. **Fill in the blanks**

(*a*) A balance sheet is a statement of what an organisation——— and what it———

(*b*) Every balance sheet must state the———of the organisation and the———of the balance sheet.

(*c*) An iron safe is a————asset for a textile shop and a———— asset for a shop dealing in iron safes.

(*d*) Gross profit is the difference between net sales for the period and——— during the period.

(*e*) Expenditure incurred in acquiring non-visible assets are classified as———assets.

(*f*) The shareholders, funds comprise of———and———

(*g*) Profit and loss appropriation account gives the disposal of———

(*h*) Tangible net worth is equal to net worth less———assets.

(*i*) Liquidity is the ability of an organisation to meet its———liabilities out of its assets.

(*j*) Final accounts of a company are prepared according to ———o the Companies Act.

3. Indicate the correct answer :

(*a*) The net worth of a limited company is

(*i*) equal to shareholders' funds
(*ii*) not equal to shareholders' funds
(*iii*) equal to paid-up share capital.

(*b*) The excess of current assets over current liabilities is called

(*i*) net worth
(*ii*) working capital
(*iii*) net tangible worth.

(*c*) If a company's tangible net worth is a positive amount, it indicates

(*i*) the solvency of the company
(*ii*) the liquidity of the company
(*iii*) the profitability of the company.

(*d*) In the case of a manufacturing company the arrangement of assets in the balance sheet is in the order of

(*i*) permanence (*ii*) liquidity (*iii*) none of the above.

(*e*) The balance sheet indicates the financial position of a concern
(*i*) as on a given date (*ii*) for a particular period (*iii*) None of the above

(*f*) Able managerial force is to any company

(*i*) an asset (*ii*) ac apital profit (*iii*) a revenue reserve.

Questions

1. Define the term "financial statements". Discuss their purposes.

2. What is a balance sheet ? Is it a statement of financial position in its true sense ?

3. "*Balance sheet is a statement of sources and uses of capital.*" Discuss.

4. Write notes on :
 (*i*) Horizontal presentation of balance sheet, and
 (*ii*) Vertical presentation of balance sheet.

5. Write notes on :
 (*i*) Multiple-step income statement, and
 (*ii*) Single-step income statement.

6. *Explain the following italicized terms :*

"Financial statements reflect a combination of *recorded facts*, accounting *conventions* and *personal judgment*."

7. What constitute financial statements ? State nature and limitations of each of the financial statements.

SUGGESTED READING

1. *Accounting for Financial Statement Presentation*—Jack L. Smith & Robert M. Keith
2. IAS-5—Information to be Disclosed in Financial Statements
3. *Financial Executives Handbook*—Richard F. Vancil

ing the calculation of income are many, the calculation of expired cos a difficult process, and recognition of reveuue is affected by various co derations.

(iv) Just as balance sheet does not disclose non-financial ite similarly, the profit and loss account does not reveal factors like qua of management, loyalty of the working force, quality of the working fo quality of the product, etc.

(v) Again as in the case. of balance sheet, the net income is result of personal judgment in such matters as depreciation, stock val tion and allocation of expenditure between capital and revenue. doubt there are accepted principles of accounting governing these, bias of the accountants cannot be removed altogether.

ASSIGNMENT MATERIAL

Objective Type Questions :

1. State whether the following statements are 'True' or 'False'

(a) A balance sheet is a statement of assets and liabilities as o given date.

(b) Reserves of a company always represent the amount which company can readily spend.

(c) Balance sheet can only indicate the items which can be expr sed in terms of money.

(d) Total capital employed by a company is the sum of shareholde funds and term liabilities.

(e) Security capable of being realised and not held with the inte tion of being retained is a current asset.

(f) The figures given in the balance sheet are the future estimat values of assets and liabilities.

(g) The accounting policies do not differ from enterprise to ente prise.

2. Fill in the blanks

(a) A balance sheet is a statement of what an organisation——an what it——

(b) Every balance sheet must state the——of the organisation an the——of the balance sheet.

(c) An iron safe is a———asset for a textile shop and a——— asset for a shop dealing in iron safes.

(d) Gross profit is the difference between net sales for the perio and——during the period.

(e) Expenditure incurred in acquiring non-visible assets are classifie as———assets.

(f) The shareholders, funds comprise of———and———

(g) Profit and loss appropriation account gives the disposal of———

(h) Tangible net worth is equal to net worth less———assets.

(i) Liquidity is the ability of an organisation to meet its———liabilities out of its assets.

(j) Final accounts of a company are prepared according to ——of the Companies Act.

3. Indicate the correct answer :

(*a*) The net worth of a limited company is

(*i*) equal to shareholders' funds

(*ii*) not equal to shareholders' funds

(*iii*) equal to paid-up share capital.

(*b*) The excess of current assets over current liabilities is called

(*i*) net worth

(*ii*) working capital

(*iii*) net tangible worth.

(*c*) If a company's tangible net worth is a positive amount, it indicates

(*i*) the solvency of the company

(*ii*) the liquidity of the company

(*iii*) *the profitability of the company.*

(*d*) In the case of a manufacturing company the arrangement of assets in the balance sheet is in the order of

(*i*) permanence (*ii*) liquidity (*iii*) none of the above.

(*e*) The balance sheet indicates the financial position of a concern (*i*) as on a given date (*ii*) for a particular period (*iii*) None of the above.

(*f*) Able managerial force is to any company

(*i*) an asset (*ii*) a capital profit (*iii*) a revenue reserve.

Questions

1. *Define the term "financial statements". Discuss their purposes.*

2. What is a balance sheet ? Is it a statement of financial position in its true sense ?

3. "Balance sheet is a statement of sources and uses of capital." Discuss.

4. Write notes on :

(*i*) Horizontal presentation of balance sheet, and

(*ii*) Vertical presentation of balance sheet.

5. Write notes on :

(*i*) Multiple-step income statement, and

(*ii*) Single-step income statement.

6. Explain the following italicized terms :

"Financial statements reflect a combination of *recorded facts*, accounting *conventions* and *personal judgment*."

7. What constitute financial statements ? State nature and limitations of each of the financial statements.

SUGGESTED READING

1. *Accounting for Financial Statement Presentation*—Jack L. Smith & Robert M. Keith

2. IAS-5—Information to be Disclosed in Financial Statements

3. *Financial Executives Handbook*—Richard F. Vancil

nalysis and Interpretation of inancial Statements

alysis and Interpretation of Financial Statements

As sta ed earlier financial statements comprise the following :

1. Trading and profit and loss account which gives the results of ear's working.

2. Profit and loss appropriation account which gives details about disposal of the retained income.

3. Balance sheet which gives the financial position of the underking as on the accounting date.

According to Mr. Harry Guthmann, "The first and most important nction of financial statement is, of course, to serve those who control d direct the business, to the end of securing the profits and maintaining sound financial condition.. questions as to how efficiently the capital the business is being utilised, how well credit standards are being obrved and whether the financial condition is being improved may be swered from the financial statements." Therefore, the analysis of ients will help the management at self-appraisal and the very state- help the shareholders to judge the performance of the management.

ne Meaning of Analysis and Interpretation

The financial statements are of much interest to a number of groups persons. Apart from management there are other interested parties ke shareholders, debenture-holders, potential investors—large and small, ankers, trade creditors, journalists, legislators and politicians who are creasingly getting interested in the analysis and interpretation of finanal statements. "To interpret means to put the meaning of a statement to simple terms for the benefit of a person."* Just as the chemist anases a compound in order to understand its elements, analysis is also quired to interpret the financial statements. This is essentially done rough the tools of analysis such as comparative statements, common ze statements and ratio analysis. These tools may be compared with ne laboratory tests which aid a physician in the diagnosis of a malady. ust as laboratory tests are only aids to a physician and the physician ust use his intelligence in the correct diagnosis, similarly the tools of nalysis only help in establishing relationship between one accounting gure and another in the financial statements and go no far. It is the xpert who has to grasp the significance of related figures and form an

* F. Wood : *Business Accounting*, Vol. II, p. 866.

opinion as to whether the ratio calculated indicates a favourable or adverse state of affairs. Therefore while analysis comprises resolving the statements by breaking them into simpler statements by a process of rearranging, regrouping and the calculation of ratios, interpretation is the mental process of understanding the terms of such statements and forming opinions or inferences about the financial health, profitability, efficiency and such other aspects of the undertaking.

Objectives of Analysis and Interpretation

The objectives for analysis and interpretation can be many, and a few of them are listed below :

1. To judge the financial health of the undertaking For example, the finance manager is concerned with the financial health of the business. He has to ensure the proper management of funds. He has to procure them at a low cost and ensure that they are effectively utilised, so that repayment of such funds as and when they become due poses no problem. Creditors and bankers are also interested in this aspect.

2. To judge the earnings performance of the company and the facility with which dividends can be paid from out of earned profits Potential investors are primarily interested in this aspect and the analysis and interpretation is done with a view to ascertain the company's position in this regard.

3. In the case of institutional investors such as LIC, UTI, etc., the analysis is carried over a long period with a view to identifying companies having growth potential and a sound financial base. According to Mr. Harry G. Guthmann, "investors as a class need to know, first, that the whole financial structure is strong—not merely that the concern will be [illegible] is sufficient evi- [illegible] in future growth, [illegible] shareholders must continuously analyse the statements to ensure that their investment is intact and that they would continue to obtain a reasonable return.

4. To judge the ability of the company to pay the principal and interest, arrangements for amortization of debt and the security available for the loans extended. Most of the companies raise a proportion of their capital requirement by issuing debentures. This is because a company pays about 10 to 12 per cent interest on debentures and earns as much as 15 to 20 per cent on the funds so raised. This facilitates the company to pay higher dividend on equity capital. The debenture holders as lenders of substantial funds have this objective in view while analysing the financial statements.

5. To judge the solvency of the undertaking. Every business reduces its working capital requirement by availing trade credits. But the business must be in a solvent position to pay the debts as and when they fall due. So the trade creditors will be mainly interested in assessing the liquidity position for which they look into the following :

(*a*) whether the current assets are sufficient to pay off the current liabilities.

(*b*) the proportion of liquid assets (cash and book debts) to current assets.

(*c*) whether the debenture-holders are secured by a floating charg on the current assets.

(*d*) The business prospects with reference to the future growth an earnings.

In the case of bankers who provide short-term working capita and of late even medium-term credit, they generally look into the follow ing :

(*a*) the purpose and period of the loan,

(*b*) the manner in which the borrower proposes to repay the loan,

(*c*) the capacity of the company to repay as judged by the *trend* o profits,

(*d*) banker's position in the event of forced liquidation,

(*e*) the quality of the management, and

(*f*) the history of the account in the past.

From the discussion given so far it is clear that there are differen objectives in analysis and interpretation and that there are different users all of them using the same statement but for a different purpose. It i the job of the financial analyst to apply his techniques of analysis an interpret the statement for the user so as to enable him to take a prope and appropriate decision.

Types of Analysis

Financial statements can be subjected to two types of analysis. The are :

(1) Trend analysis or dynamic analysis *which is made by* analysin financial statements over a period of years. This indicates the tren such variables, as sales, cost of production (or operation) profits, asset and liabilities. For this purpose comparative financial statements ar prepared horizontally.

(2) Structural analysis or *static* analysis which is made by analy sing a single set of financial statements as are prepared on a particula date. It is called *structural analysis, because the relationship* betwee different accounting variables is studied as, for example, the ratio of ne profit to sales or the ratio of liquid assets to current liabilities.

Tools of Financial Analysis

As discussed earlier, the financial statements must be made simple for any reader to understand the operating results and the financial healt of the business. This is done with the help of the following tools financial analysis :

(*a*) Comparative balance sheets and income statements,

(*b*) Common size percentages,

(*c*) Trend ratios, and

(*d*) Ratio analysis.

It is only the analysis with the aid of the above tools that helps th interested reader in giving tongue to the dumb heaps of figures which i turn help in achieving the ultimate aim of interpreting the financi

I. COMPARATIVE STATEMENTS

Financial statements of two or more firms may be compared for drawing inferences. This is known as inter-firm comparison. Similarly, there may be inter-period comparison, *i.e.*, comparison of the financial statements of the same firm over a period of years known as trend analysis. This is also known as horizontal analysis, since each accounting variable for two or more years is analysed horizontally. Inter-firm or inter-period comparisons are very much facilitated by the preparation of comparative statements. In preparing these statements, the items are placed in the rows and the firms or years are shown in the columns. Such arrangement facilitates highlighting the differences and brings out the significance of such differences. The statement also provides for columns to indicate the change from one year to another in absolute terms and also in percentage form. In calculating percentages, there is one difficulty, namely, if the figure is negative, percentage cannot be calculated. Likewise, if the change is from or to a zero balance in account, it is not possible to calculate the percentage.

Advantages

1. These statements indicate trends in sales, cost of production, profits, etc., helping the analyst to evaluate the performance, efficiency and financial condition of the undertaking. For example, if the sales are increasing coupled with the same or better profit margins, it indicates healthy growth.

2. Comparative statements can also be used to compare the position of the firm with the average performance of the industry or with other firms. Such a comparison facilitates the identification of weaknesses and remedying the situation.

Disadvantages

1. Inter-firm comparison may be misleading if the firms are not of the same age and size, follow different accounting policies in relation to depreciation, valuation of stock, etc., and do not cater to the same market.

2. Inter-period comparison will also be misleading if the period has witnessed frequent changes in accounting policies.

The following statements illustrate the comparative financial statements :

Illustration 1.

Prasanti Limited

COMPARATIVE INCOME STATEMENTS

for the years ended December 31, 1978 and 1979

	1979 Rs.	*1978* Rs.	*Absolute Increase (or decrease)* Rs.	*Percentage Increase (or decrease)*
Sales (Net)	11,00,000	10,00,000	1,00,000	10
Less : Cost of goods sold	8,40,000	8,00,000	40,000	5
Gross profit	2,60,000	2,00,000	60,000	30
Less : Operating expenses (Office, Administrative, selling and distribution)	60,000	50,000	10,000	20

et operating profit	2,00,000	1,50,000	50,000	33⅓
ther income	20,000	20,000	—	—
arnings before interest id tax (EBIT)	2,20,000	1,70,000	50 000	29·4
iterest paid	20,000	20,000	—	—
rofit before tax (PBT)	2,00,000	1,50,000	50,000	33-1/3
icome-tax payable	1,00,000	75,000	25,000	33-1/3
rofit after tax (PAT)	1,00 000	75,000	25,000	33-1/3

Prasanti Limited

COMPARATIVE BALANCE SHEETS

as on 31st December 1978 and 1979

	1979 Rs.	*1978* Rs.	*Absolute increase (or decrease)* Rs.	*Percentage increase (or decrease)*
Fixed assets	5,00,000	4,00,000	1,00,000	25
Investments	1,00,000	1,00,000	—	—
Working capital: (Current assets less current liabilities)	2,00,000	1,00,000	1,00 000	100
Capital employed	8,00,000	6 00,000	2,00,000	33-1/3
Less Debentures	2,00,000	2,00,000	—	—
Shareholders' funds represented by	6,00,000	4,00,000	2,00,000	50
Preference share capital	2,00,000	1,00,000	1,00 000	100
Equity share capital	3,00,000	2,00,000	1,00,000	50
Reserve and surplus	1,00 000	1,00,000	—	—
	6,00,000	4 00,000	2,00,000	50

Brief Comments

1. The *comparative income statement* suggests that there is a jump of 30 per cent in gross profit because of increase in sales and increase in the profit margin. Increase in the gross profit margin can be ascertained from the fact that the 10 per cent increase in sales is not accompanied by a proportionate increase in the cost of production. However, the net profit is reduced by Rs. 10,000 because of the increase in operating expenses. The overall position of the income statement indicates a favourable situation.

2. The analysis of balance sheet changes indicates an increase of 33⅓% in capital employed due to 25 per cent increase in fixed assets and 100 per cent increase in working capital. There is no increase in debenture liability and the increase in the current liabilities is only marginal. Therefore the increase in the total assets is substantially due to increase in owners' equity indicating a very satisfactory financial position.

II. COMMON-SIZE STATEMENTS

Financial statements when read with absolute figures are not easily understandable, sometimes they are even misleading. It is, therefore, necessary that figures reported in these statements should be converted into percentage to some common base. In profit and loss account sales figure is assumed to be equal to 100 and all other figures are expressed as percentage of sales. Similarly, in balance sheet the total of assets or liabilities is [illegible] percentage of the total. [illegible] This is a static relationship [illegible] a particular date. The statements so prepared are called common-size statements. A few illustrations of common size statements are given below.

Illustration 2. From the profit and loss accounts of Dharmasa Ltd for the years ended on 31st December, 1977, 1978, and 1979 prepare common-size statement and interpret.

Dharmasa Ltd
PROFIT AND LOSS ACCOUNTS
for the years ended December 31

		1979 Rs.	1978 Rs.	1977 Rs.
Net sales		31,85,025	22,30,150	14,35,073
Cost of goods sold		22,70,150	15,35,075	10,45,175
Gross margin		9,14,875	6,95,075	3,89,900
Operating expenses		6,01,825	4,02,025	2,35,550
Net operating income		3,13,050	2,93,050	1,54,350
Interest expense		30,750	18,750	2,000
Net income before income tax		2,82,300	2,74,300	1,52,350
Provision for taxes at 50%		1,41,150	1,37,150	76,175
Net income after income tax	Rs.	1,41,150	1,37,150	76,175
Depreciation included in cost of goods sold and operating expense		91,800	58,025	28,925

(*B*) *Common-size statement*

Dharmasa Ltd
PROFIT AND LOSS ACCOUNT (COMNON-SIZE)
for the years ended December 31

	1979 %	1978 %	1977 %
Net sales	100·0	100·0	100·0
Cost of goods sold	71·3	68·8	72·8
Gross margin	28·7	31·2	27·2
Operating expenses	18·9	18·1	16·4
Net operating income	9·8	13·1	10·8
Interest expense	1·0	0·8	0·1
Net income before income-tax	8·8	12·3	[illegible]
Provision for tax	4·4	6·1	5·3
Net income after income-tax	4·4	6·2	5·4

Interpretation. The absolute figures in rupees show that sales, cost of goods sold and gross profit all have continuously increased since 1977. But common-size statement reveals that cost of goods sold in relation to sales decreased in 1978 and again increased in 1979. Consequently rate of gross profit in 1978 over 1977 increased but in 1979 over 1978 decreased. Similarly, net profit after tax, in absolute figures, shows an increasing trend since 1977 but the rate of net profit on sales in 1979 is 4·4 in contrast to 6·2 in 1978 and 5·4 in 1977.

Illustration 3. From the following income statement of X—'has Ltd. for the years ending December 31, 1978 and 1979 you are required to prepare common-size statements :

	1978 Rs.	1979 Rs.
Gross	1,51,500	1,41,54[illegible]
Less Returns	1,500	1,54[illegible]
Net sales	1,50,000	1,40,00[illegible]
Cost of goods sold	1,05,000	99,40[illegible]
Gross profit	45,000	40,60[illegible]
Expenses:		
Selling expenses	7,500	7,560
General expenses	4,500	4,500
Financial expenses	750	560
Total expenses	12,750	12,620
Net profit	32,250	29,9[illegible]

Solution

X—'has Ltd.
COMMON-SIZE STATEMENT

	1978	*1979*
Gross sales	101·0	101·1
Less : Returns	1·0	1·1
Net sales	100·0	100·0
Cost of goods sold	70·0	71·0
Gross profit	30·0	29·0
Expenses :		
Selling expenses	5·0	5·4
General expenses	3·0	3 2
Financial expenses	0 5	0·4
Total expenses	8·5	9·0
Net profit	21·5	20 0

III.—TREND ANALYSIS

For analysing the trend of data shown in the financial statement it is necessary to have statements for a number of years. This metho[d] involves the calculation of percentage relationship that each statemen[t]

item bears to the *same item* in the "*base year*". Trend percentages disclose changes in the financial and operating data between specific period and make possible for the analyst to form an opinion as to whether favourable or *unfavourable tendencies are reflected by the data. The following is* an example of trend analysis of the asset side of the balance sheet of Martir Limited :

Martir Ltd.
COMPARATIVE BALANCE SHEET
as on December 31, 1974-79
(Rupees in '000)

Assets	*December 31*						*Trend percentages Base date : December 31, 1974 100*				
	1974	*1975*	*1976*	*1977*	*1978*	*1979*	*1975*	*1976*	*1977*	*1978*	*1979*
Current assets :	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	%	%	%	%	%
Cash	15 4	18·2	16 0	14 3	14 5	11·8	118	104	93	94	77
Marketable securities	7 2	5·5	4·4	5·6	6 9	2 7	76	61	78	96	37
Debtors	30 3	29 7	28·8	25·1	29 4	29·7	98	95	83	97	98
Stock-in-trade (Fifo)	39 4	37 4	35 9	36·2	42 6	41 8	95	91	92	108	106
Other current assets	1·8	0·5	3 4	4 4	2 6	0·6	—	—	—	—	—
Total current assets	94 1	91·3	88 5	85 6	96 0	86·6	97	94	91	102	92
Long-term investments	1·2	4 9	5·3	6·8	1 3	11·6	408	442	567	108	967
Property, plant, etc.	121·6	141·1	156 9	170 2	187·3	206 7	116	129	140	154	170
Less : Accumulated depreciation	49 7	58 4	63 4	70 3	72 3	80·9					
Net	71 9	82 7	93 5	99 9	115 0	125·8	115	130	139	160	175
Total assets	167·2	178 9	187·3	192 3	212 3	224·0	107	112	115	127	134

Trend ratios are calculated only for some important items which can be logically *connected* with each other. Unless the figure is connected with other figures, they are not as much meaningful. For example, trend ratio for sales, though shows a clear-cut increasing tendency, becomes meaningful in the real sense when it is compared (*i*) with operating assets which might have increased, at a higher rate ; (*ii*) with the cost of goods sold which might have increased at a lower rate ; or (*iii*) with operating expenses. An upward trend for inventories (stock-in-trade); bills receivable and debtors accompanied by a downward trend for sales would reflect unfavourable condition. While reading trend percentages it is necessary to guard against the following types of weak links :

Accounting practices. Trend percentages or ratios become uncomparable if accounting practices reflected in accounts have not been consistently followed year after year.

Price level changes. A change in price level makes comparison out of tune. If prices in 1974 have increased by 80% over the prices of 1960

then increase in sales by 50% will give a misleading picture. Figur of the current year must be adjusted in the light of price level chan before trend percentages are calculated.

Absolute figures. Trend percentages must not be read without co sidering the absolute data on which they are based. In the absence absolute data, the conclusions can be misleading. For example, one e pense may increase from Rs 50 to Rs. 100 and another from Rs 40,0 to Rs. 80,000 In each case trend percentage will reflect 100% increa although the increase in the first case is insignifican . Similarly, undesi able doubts may be created by a 100% increase in debts and only 5C increase i equity capital. Actual data reveal the position clearly wh it is found that debts have increased from Rs. 20,000 to Rs. 40,000 a equity capital has increased from Rs. 3,00,000 to Rs. 4,50,000.

IV—RATIO ANALYSIS

A ratio is a statistical yardstick that provides a measure of relatio ship between two accounting figures. *Ratio analysis of financial sta ments* stands for the process of determining and presenting the relatic ship of items and group of items in the statements. Ratio analysis can used both in the trend analysis and static analysis. There are seve ratios which an analyst can employ, but the type of ratios he would p cisely use depends on the purpose for which the analysis is made. stated earlier a creditor would like to know the ability of the compa to meet its current obligations and therefore would think of current a liquid ratios, turnover of receivables, coverage of interest by the level earnings, etc. Similarly, a manager would like to know the operatior efficiency and would think of such ratios as return on investment, turnov of fixed assets, net profit to sales, etc. Investors will be interested in su ratios as earnings per share, book value per share, and dividends per sha

Classification of ratios

One classification is based on the statement from which the ratios a calculated. Thus there are : (1) Balance sheet ratios based on balance sh figures : (2) profit and loss account ratios based on profit and loss accou and (3) balance sheet and profit and loss account ratios based on bc statements. The chart below gives examples of ratios under each of th categories.

Balance Sheet Ratios	*Profit and Loss Statement Ratios*	*Balance Sheet and Pro and Loss Statement Rat*
1. Current ratio or working capital ratio 2. Liquid ratio or quick assets ratio or acid test ratio 3. Proprietary ratio 4. Assets-proprietorship ratio	1. Gross profit ratio 2 Operating ratio 3. Expense ratio 4. Net profit ratio 5. Stock turnover or turnover of inventory	1. Return on total resou 2. Return on own funds 3. Turnover of fixed ass 4. Turnover of debtors 5. Earnings per share

Ratios may also be classified from the angle of the users. Thus can have ratio analysis (*i*) from shareholders' point of view, (*ii*) from sho

term creditors' point of view ; and (*iii*) from long-term creditors' point of view. Ratios are also classified on the basis of their function as profitability ratios, solvency ratios, performance or activity ratios and financial ratios. In recent years ratios have been used as a measure of prediction of events. Ratios have been used as a warning system to indicate the failure of companies. Edward Altman developed a sophisticated statistical technique called multiple discriminant analysis to financial ratio analysis which helps to predict corporate bankruptcy. Various others have developed techniques for the use of ratios as predictors of events, such as bankruptcy, failure and non-compliance of loan agreements.

Ratios are expressed in various forms. They are :

(*a*) Pure ratios which are arrived at by the simple division of one number by another, *e.g.*, current asset to current liability ratio is 2 : 1.

(*b*) Rate which is the ratio between two numerical facts, usually over a period of time, *e.g.*, stock turnover is three times a year.

(*c*) Percentage which is a special type of rate expressing the relation in hundredth, *e.g.*, gross profit is 25% on sales.

Ratios can be used in static analysis by taking a single year's balance sheet or in dynamic or trend analysis by taking the balance sheets of several years. Ratio analysis involves two types of comparisons, namely, (1) present ratio with the past or future ratio for the same firm : and (2) ratios of one firm with that of a similar one or with the average of industry at the same point of time. Ratio analysis becomes complete only after comparing the ratios of the firm with the average or standard ratios of the industry. It is also important to use more than one ratio rather than rely on a single ratio for judging some aspect of the undertaking.

Ratio analysis when rightly used offers the following advantages :

1. It facilitates the comprehension of financial statements and evaluation of several aspects such as financial health, profitability and operational efficiency of the undertaking.

2. It provides inter-firm comparison to measure efficiency and helps the management to take remedial measures.

3. It is also helpful in forewarning corporate sickness and helps the management to take corrective action.

4. Trend analysis with the use of ratios helps in planning and forecasting

5. It helps in investment decisions in the case of investors and lending decisions in the case of bankers and financial institutions.

Classification of balance sheet items :

As a preliminary to the calculation of ratios, it is necessary to classify and group the balance sheet items. In chapter 1 this aspect of classification and grouping has been dealt with and following illustration will make it clear.

Illustration 4. Following is the balance sheet of *X, Y, Z* & Co. Ltd, as on 31-12-1979 :

Liabilities	Rs.	*Assets*	Rs.
Share capital		Land	4,00,000
Authorised, issued and fully paid-up : 50,000 9% preference shares of Rs. 100 each	50,00,000	Building	21,00,000
5,00,00 equity shares of Rs. 10 each	50,00,000	Plant and machinery	1,19,00,000
	1,00,00,000	Furniture and fittings	1,50,000
Capital reserves	5,00,000	Office cars, trucks	1,50,000
General reserves	10,00,000	Stock	1,50,00,000
Sinking fund reserves	15,00,000	Accounts receivable	6,00,000
7% Debentures	50,00,000	Cash and bank	2,00,000
Bank overdraft	85,00,000		
Notes payable	15,00,000		
Accounts payable	25,00,000		
Rs.	3,05,00,000	Rs.	3,05,00,000

Compute the following from the above balance sheet :

(1) Net worth

(2) Total value of equity

(3) Shareholders reserves

(4) Total fixed assets

(5) Total current assets

(6) Working capital

(7) Long-term liabilities

(Show the workings, where necessary)

(Adapted from M.B.A. Madras)

Solution.

(1) Net worth

This is equal to net assets of the company or alternatively it is equal to proprietors' fund, namely, paid-up capital plus reserves. The figure is arrived at by calculating both ways.

(*a*)

Gross assets as per balance sheet		Rs.	3,05;00,000
Less : Liabilities			
7% Debentures	Rs. 50,00,000		
Bank overdraft	85,00,000		
Notes payable	15,00,000		
Accounts payable	25,00,000		
			1,75,00,000
		Net worth	1,30,00,000

Alternatively

(*b*) *Paid-up capital*

Preference share capital	50,00,000	
Equity share capital	50,00,000	
		1,00,00,000

Reserves :

Capital reserve	5,00,000		
General reserve	10,00,000		
Sinking fund reserve	15,00,000		
			30,00,000
		Net worth	1,30,00,000

(2) Total value of equity

This can be obtained by subtracting what is due to preference shareholders from the net worth of the undertaking or alternatively by adding up paid-up equity capital and reserves belonging to them.

Net worth as calculated under *(1)*	Rs.	1,30,00,000
Less : Preference share capital		50,00,000
	Total value of equity	80,00,000

(3) Shareholders reserves

Capital reserve		5,00,000
General reserve		10,00,000
Sinking fund reserve		15,00,000
	Total	30,00,000

(4) Total fixed assets

Land	Rs.	4,00,000
Building		21,00,000
Plant and machinery		1,19,00,000
Furniture and fittings		1,50,000
Office cars and trucks		1,50,000
	Total	1,47,00,000

(5) Total current assets

Stock		1,50,00,000
Accounts receivable		6,00,000
Cash at bank		2,00,000
	Total	1,58,00,000

(6) Working capital

It is equal to current assets less current liabilities

Current assets as calculated under (5)			1,58,00,000
Less : Current liabilities			
Bank overdraft	Rs.	85,00,000	
Notes payable		15,00,000	
Accounts payable		25,00,000	
			1,25,00,000
		Working capital	33,00,000

) Long-term liabilities

7% Debentures	Rs.	50,00,000
	Rs.	50,00,000

Ratios based on quantitative data. The popular impression is that ratios re based only on the rupee figures taken from financial statements. It is ot true. Ratios can also be calculated on the basis of quantitative data. hanks to the amendments made to Schedule VI of the Companies Act. n analyst gets a lot of quantitative data for him to work out quantitative atios. Some of these ratios are very helpful in judging the operating fficiency of the undertaking. For example, the input-output ratio which ndicates the relationship between the quantity of input with the quantity roduced provides management an excellent tool of performance and valuation control. These ratios have an added advantage, namely, unike the ratios based on rupee figures they are not affected by changes in he value of the rupee.

Standards for comparison

For effective ratio analysis there must be some standard ratios with which the actual ratios can be compared. The significance of a ratio calculated can be grasped only after it is compared with a standard ratio. For this purpose four types of standards are employed and they are :

(*a*) *Historical standards.* These are the past ratios of the company. Present performance can be judged on the basis of past performance and the persons concerned can draw inferences about the improvement or otherwise of the particular aspect. However, these standards are not satisfactory. For example, if we take operating ratio of the past as the standard, we may be merely comparing present inefficiency with the inefficiency of the past.

(*b*) *Absolute Standards.* These are determined by the rule of thumb. For example, in the case of current ratio 2 : 1 is considered to be desirable. We will be later discussing the limitations of such standards and therefore these standards are also not ideal for an analyst.

(*c*) *Horizontal Standards.* These are the average ratios calcalated for the entire industry or the ratios of some other firm engaged in the same line. The difficulty in using such ratios is that no two firms are similar in size, accounting policies and corporate objectives. So, naturally there will be significant differences between the standard adopted and the actual ratio. However the ratios calculated for the industry as a whole provide a satisfactory standard to judge and interpret the ratios of the individual firm.

(*d*) *Budgeted Standards.* These standards are based on budgeted figures. The actual ratios are compared with budgeted ratios and are, therefore, useful for the internal management as a tool of performance and evaluation and control. The utility even for the internal analyst depends much upon the care with which budgets are drawn up. Sometimes the assumptions made at the time of preparing the budget may go wrong because of abnormal developments. External analysts usually look to historical and/or horizontal standards.

Limitations of Ratio Analysis

Before we discuss the limitations, it must be clearly understood that the two major purposes of financial statement analysis are (1) determination of financial solvency and (2) evaluation of profitability. In the case of the first we are trying to asses the capability of the company to meet its financial obligations as they mature and in the case of the second an evaluation is made about future rate of return as a whole or for a particular security in which we are interested. We use more than one ratio for each purpose. It is generally considered that the profitability ratios are more useful than the solvency ratios, because of their predictive power for both purposes. Now let us consider some of the important limitations of this tool.

(*a*) Ratio analysis is based on financial statements which are themselves subject to severe limitations * Therefore, any ratio analysis based on such statements suffers from similar limitations.

(*b*) In the case of inter-firm comparison no two firms are similar in age, size and product unit. Therefore, any comparison of ratios of two such firms must take these factors into account.

(*c*) Both the inter-period and inter-firm comparisons are affected by price level changes. A change in price-level can affect the validity of ratios calculated for different time periods. In such a case the ratio analysis may not clearly indicate the trends in solvency and profitability of the company.

Likewise, there may be two firms—one having purchased the assets at a lower price and another at a higher price. Return on investment calculated for such firms is bound to differ substantially. The firm which has purchased the assets at a lower price will have a higher return than the firm which has purchased the assets at a higher price. Therefore, inter-firm comparisons are also vitiated due to price-level changes.

(*d*) Unless the various terms like gross profit, operating profit, net profit, current assets, current liabilities, etc., are properly defined, comparisons become meaningless. This problem is now being solved with the adoption of international accounting standards. Differences in accounting policies with reference to stock valuation, depreciation and other matters can also create problems in the matter of inter-firm comparison and also inter-period comparison.

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* Discussed in Chapter 1—Vide FSA-14

(e) Ratios are simple to understand and easy to calculate. Therefore, there has been a tendency to overemploy them. However, it should be clearly understood that ratios are only tools and the personal judgment of analyst is more important. Again, the analyst should not merely rely on a single ratio. He has to take several ratios (connected) into account before reaching a conclusion.

(f) Conclusions from analysis of statements are not sure indicators of bad or good management. They merely convey certain observations pointing to the probability of matters needing investigation. It is not wise to assume without further investigation that a condition particularly favourable or unfavourable is present. For example, a high inventory turnover generally considered to be indication of operating efficiency, may be temporarily achieved by unwarranted price reductions, failure to maintain stock in hand or other unsound policies. Similarly, a high current ratio although index of strong current position, may result from unreasonable accumulation of liquid resources.

(g) Ratio analysis is based on the balance sheet prepared on the accounting date. This practice, in some cases, may lead to window-dressing to cover up bad financial position. So, ratios based on such figures are not reliable. It is, therefore, perferable for the analyst to base his ratios on the average figures rather than the figures pertaining to the accounting date.

Similarly, in the case of seasonal industries the ratios calculated at the height of season and the ratios calculated during the off-season will have no similarity. The particular time of analysis must be taken into account by the analyst.

(h) Ratio analysis is only a tool and is helpful to spot out the symptoms. The analyst has to carry out further investigations and exercise his judgment in arriving at a correct diagnosis.

These ratios are divided into the following three parts : (i) Analysis from shareholders' point of view ; (ii) from short-term creditors' point of view ; and (iii) from long-term creditors' point of view.

ANALYSIS FROM EQUITY SHAREHOLDERS' POINT OF VIEW

Equity shareholders are primarily interested in the capital appreciation of their investment and dividend per share. Both these factors are mainly influenced by the earnings of the company. Therefore, in order to assess the attractiveness of investment in equity shares, the main factor to be considered is the income of the company. The following ratios are

computed for assessing the worth of the company from the point of view of equity shareholders : (*a*) Earning per share (EPS) ; (*b*) Price-earning ratio (P.E Ratio) ; (*c*) Payout ratio ; (*d*) Dividend yield ; (*e*) Profitability ratios which include (*i*) Sales ratios, (*ii*) Expense ratios, and (*iii*) Profit ratios. A brief description of these ratios has been given below.

(*a*) **Earning Per Share (EPS).** Earning per share is calculated with the help of the following formula :

$$\text{Earning per share} = \frac{\textbf{Net income minus preference dividends}}{\textbf{Number of equity shares}}$$

Preference dividend is deducted from the net income to arrive at the income available for equity shares. When this is divided by the number of equity shares it gives the income earned for each equity share. The more the earning per share, better are the performance and prospects of the company.

The increasing tendency of earning per share enhances the possibility of more cash-dividend or bonus shares. This ultimately has a favourable effect on the market price of share. Because of this, many companies give information about the trend in this ratio in their published accounts.

Although earning per share is probably the most widely published and used data, it should not be believed blindly. First, earning per share [illegible] Secondly, [illegible] be distort- [illegible] to stock-in- [illegible] figure must not be used blindly. The financial data from which earning per share is calculated must also be studied.

Diluted earnings per share. Nowadays companies have complex capital structures. They sometimes issue preference shares and debentures with a right of option to the holder to convert the security either partly or fully into equity shares. Such options must be treated as equity share equivalents in computing earnings per share. The calculation based on the maximum potential number of shares outstanding is known as diluted earnings per share. The usual calculation based on the equity shares actually outstanding is called 'Primary earnings per share'. An illustration will further explain the point.

Illustration 5. From the data pertaining to Vasu Prada Limited given below, calculate the primary earnings per share and also the diluted earnings per share :

(*i*)	10,000 Equity shares of Rs. 100 each	Rs.	10,00,000
(*ii*)	10,000 10% Preference shares of Rs. 100 each		10,00,000
(*iii*)	The preference shareholders have the right to convert 50% of their holding into equity shares		
(*iv*)	Net income for the year under review		3,00,000

Solution :

Primary earnings per share :

Net income for the year		3,00,000
Less : Preferred dividends (10% on 10,00,000)		1,00,000
Net income net of means after deducting preference dividends	Rs.	[illegible]

$$\text{Earnings per share} = \frac{\text{Rs. } 2{,}00{,}000}{10{,}000} = \text{Rs. } 20$$

Diluted earnings per share :

Net income	Rs.	3,00,000
Less : Preferred dividends on holding that cannot be converted		50,000
	Rs.	2,50,000
Existing equity shares		10,000
Additional equity shares to be issued after preference shareholders exercise option		5,000
Maximum potential number of equity shares outstanding		15,000

$$\therefore \text{ Diluted earnings per share} = \frac{\text{Rs. } 2{,}50{,}000}{15{,}000} = \text{Rs. } 16{\cdot}67$$

(*b*) **Price-earning ratio.** This ratio is determined by the following formula :

$$\text{Price-earning ratio} = \frac{\text{Market price per equity share}}{\text{Earning per share}}$$

This ratio also known as 'earnings multiple' generally measures how much the public is willing to pay for the company's prospects for earnings. This ratio largely depends on market factors. Therefore, this ratio differs from company to company within the same industry and also for the same company over a period. A high P.E. Ratio indicates investors' confidence in the stability and growth of company's income. There is a certain relationship between this ratio and the capitalisation rate—one being the reciprocal of the other.

$$\text{Capitalisation Rate} = \frac{\text{Earnings per share}}{\text{Price per share}}$$

$$\text{P.E. Ratio} = \frac{1}{\text{Capitalisation rate}}$$

$$= \frac{1}{\dfrac{\text{Earnings per share}}{\text{Price per share}}} = \frac{\text{Price per share}}{\text{Earnings per share}}.$$

This ratio is a very important for predicting the market price of equity shares at some future date and in knowing whether the shares of the company are undervalued or overvalued. This is done by comparing the P.E. Ratio of the company with the P.E. Ratios of other companies. An illustration is given below to explain the procedure :

Illustration 6. The earnings per share of Delta Ltd is Rs. 20 and the market price of the equity share is Rs. 140. If the P.E. Ratio of similar companies is 8, ascertain whether the share is over-or undervalued and by how much.

Solution :

$$\text{P.E. ratio} = \frac{\text{Market price per share}}{\text{Earnings per share}}$$

∴ Market price per share = Earnings per share × P.E. Ratio.

As the P.E. Ratio of similar companies is 8, the same holds good for Delta Ltd as well

∴ The correct market price of equity share of Delta Ltd ought to be

$$= \text{Rs. } 20 \times 8$$
$$= \text{Rs. } 160.$$

As the actual market price is only Rs. 140, the share is undervalued by (Rs. 160 – Rs. 140) Rs. 20.

This type of calculation helps the investor in taking a decision whether or not he should buy shares of the company in question. If yes, then to what extent the capital appreciation is possible.

(*c*) **Pay-out ratio.** Dividend pay-out ratio is determined as follows:

$$\textbf{Pay-out ratio} = \frac{\textbf{Dividend per equity share}}{\textbf{Earning per share}}$$

The pay-out ratio reveals as to what portion of earning per share [illegible] for plough- [illegible] the investor, [illegible] the company [illegible]s for paying dividened and has retained nothing for expansion programmes. Then he should [illegible] There are alm[illegible] of such [illegible] invest in the shares of a company having a low pay-out ratio.

On the other hand, for those investors who seek regular cash returns on their investments, shares with a high pay-out ratio are preferable. They are not interested in bying shares of growth companies. Growth is possible only by adopting conservative dividend and such companies will only have a low pay-out ratio.

(*d*) **Dividened yield ratio.** This is calculated as follows :

$$\frac{\textbf{Dividend per share}}{\textbf{Market price per equity share}} \times 100$$

This ratio is calculated primarily by those investors who are interested in the dividend income. Since shares are purchased by the investor in the open market, the rate of return (yield) to him is not equal to the rate of dividend declared by the company. In order to calculate the yield, he first calculates the dividend per share keeping in view the rate of dividend and the paid-up value of the share and then relates the amount of dividend per share with the market price per share. For example, if a company declares 20% dividend on its shares of Rs. 10 each, Rs. 8 paid-up of which the market price is Rs. 25 then the yield will be calculated as under :

$$\text{Dividend per share} = \frac{20}{100} \times 8 = \text{Rs. } 1{\cdot}60$$

$$\text{Yield} = \frac{\text{Dividend per share}}{\text{Market price per share}} \times 100$$

$$= \frac{1{\cdot}60}{25} \times 100 = 6{\cdot}4\%.$$

Therefore, in the above case the effective earning rate to the investors in equity shares of the above company is 6·4% (not 20% as declared by the company).

Illustration 7. The capital of Everest Co Ltd is as follows :

9% Preference shares of Rs. 10 each	Rs.	3,00,000
Equity shares of Rs. 10 each		8,00,000
	Rs.	11,00,000

The accountant has ascertained the following : (*a*) Profit after tax at 60% Rs. 2,70,000 ; (*b*) Depreciation Rs. 60,000 ; (*c*) Equity dividend paid at 20% ; (*d*) Market price of equity share Rs. 40.

You are required to state the following : (*a*) The dividend yield on equity shares ; (*b*) The cover for the preference and equity dividends ; (*c*) The EPS ; and (*d*) The price-earning ratio.

(C.A. Final, 1972 ; Modified)

Solution :

(*a*) *Dividend yield on equity shares* :

$$\text{Dividend per equity share @ } 20\% = \frac{20}{100} \times \text{Rs. } 10 = \text{Rs. } 2.$$

$$\text{Dividend yield} = \frac{\text{Dividend per share}}{\text{Market value per share}} \times 100$$

$$= \frac{2}{40} \times 100 = 5\%$$

(*b*) *Cover for the preference and equity dividend* :

(*i*) $$\text{Cover for preference dividend} = \frac{\text{Earning available for preference shares}}{\text{Preference dividend}}$$

$$= \frac{2{,}70{,}000}{27{,}000^{*}} = 10 \text{ times}$$

(*ii*) $$\text{Cover for equity dividend} = \frac{\text{Earning available for equity shares}}{\text{Equity dividend}}$$

$$= \frac{2{,}43{,}000^{1}}{1{,}60{,}000^{2}} = 1{\cdot}52 \text{ times}$$

* at the rate of 9% on Rs. 3,00,000.

[1] Rs. 2,70,000 – preference dividend. [2] At 20% on Rs. 8,00,000.

(*c*) *Earning per share (EPS)* :

$$EPS = \frac{\text{Profit after tax and preference dividend}}{\text{No. of equity shares}}$$

$$= \frac{2,43,000}{80,000} = \text{Rs. } 3{\cdot}03.$$

(*d*) *The price-earning ratio* :

$$\text{Price-earning ratio} = \frac{\text{Price per equity share}}{EPS}$$

$$= \frac{\text{Rs. } 40}{3{\cdot}03} = 13{\cdot}17 \text{ times}$$

Profitability Ratios

These include (*i*) Sales ratios ; (*ii*) Expense ratios ; and (*iii*) Profit ratios.

(*i*) **Sales ratios.** (*a*) *Sales to fixed assets ratio or fixed assets turnover ratio.* Sales commensurate to the investment in the fixed assets is an important measure of the efficiency and profit-earning capacity of the concern because higher the sales per rupee of fixed assets, the greater is the intensive utilisation of fixed assets. Low sales in relation to fixed assets means under-utilisation of fixed assets. But too much sales may be an indication of over-trading.

(*b*) *Sales to owned capital or total net worth.* Share capital normally stands for equity share capital but in some cases it includes preference share capital also. If reserves are also included in the share capital then it is pronounced as net worth. Sales in relation to owned capital or net worth is a good index of utilisation of capital and reflects the profit-earning capacity of the concern. Too much sales in relation to capital is, of course, not a good indication because it means over-trading. It is a [illegible] ne of busi- [illegible] of credit. [illegible] difficulties and inability to meet the heavy liabilities that are built up. If such a business fails, the usual verdict after a post-mortem is that the business died of under-capitalisation.

Over-trading results because of over-emphasis on sales by certain [illegible] at its dispo- [illegible] funds into [illegible] the correct [illegible]

[illegible] -nover ratio. Work- [illegible] current liabilities. [illegible] Too high [illegible] too [illegible] r over-t [illegible]

(*ii*) **Expense ratios.** There are many expense ratios, such as—factory expense to sales, administrative expense to sales, sales expense to sales, or any other individual expense (advertisement expense, commission, fuel, and so on) to sales. All these ratios when calculated and compared either with the same ratios of the previous year or some standard ratios determined by the management give a very important indication whether these expenses in relation to sales are increasing or decreasing or stationary, which in its turn reflect the profit-earning capacity of the concern. With increasing sales if the management can limit these operating expenses, it indicates the efficiency of management in improving the operating efficiency of the company. The lower the ratio, the greater is the profitability. Sometimes all operating expenses are added and compared with the sales. This ratio is called **operating expense ratio.**

(*iii*) **Profit ratios.** (*a*) *Gross Profit Ratio.* This ratio is calculated by dividing the gross profit by net sales and is usually expressed as a percentage. This ratio is of particular importance in all such trades where there is a fixed mark-up because any deviation from the standard mark-up would reflect losses due to theft, damage, bad stock management, or bad sales policy, etc. This ratio can also be used in stock-inventory control. Maintenance of steady gross profit ratio is important inasmuch as any fall in this ratio would put the management in difficulty in the realisation of fixed overheads of the business. Where a number of different products are sold, this ratio has to be calculated for each of the products separately. There may be a gross profit for the company as a whole, but one or two products may be showing gross loss. This will come to light only when this ratio is calculated for each of the products. A comparison of gross profit ratio over a period will show the trend of trading results and an increase or decrease is a very significant pointer to judge the efficiency or otherwise of the management. Similarly a comparison of this ratio with that of other firms will again help to judge the competence of the particular management.

The gross profit ratio is usually different for different types of industry and also for different units within the same industry. However, like the concept of normal rate of return, for each type of industry there is a standard gross profit ratio and such a ratio helps the individual company to judge its own ratio.

(*b*) *Rate of return on equity share capital.* This ratio is calculated by dividing the net profits (after deducting income tax and dividend on preference share capital) by the paid-up amount of equity share capital and usually expressed in percentage. It has got the following uses:

(*i*) It determines the earning power of equity share capital.

(*ii*) It enables the earning capacity of the enterprise to be contrasted with the earning capacity of other investment. Thus an idea may be formed as to whether an adequate return is being obtained for the risks borne.

(*iii*) It reflects on the character of the management, the probable demand for the company's products, industrial conditions, and so on.

This ratio is helpful to shareholders to judge the effectiveness of the management in running the undertaking and also an indicator of the earning power of business. The dividend prospects are higher when this ratio is higher. This ratio also helps the potential investor to take a decision.

(c) *Return on proprietor's funds or return on net worth.* Instead of dividing the net profits by equity share capital, now in this case it is divided by the proprietor's funds. Proprietor's funds include share capital (whether equity or preference) and all accumulated profits. Alternatively proprietor's funds may be taken as equal to fixed assets *plus* current assets *minus* all outside liabilities both long-term and current. This ratio helps the proprietors and potential investors to judge the earning of the company in relation to others and the adequacy of the return on proprietor's funds.

(d) *Return on equity capital or return on equity capital employed.* This ratio is calculated as under .

$$\text{Return on equity capital} = \frac{\text{Net income (after taxes) minus preference dividend}}{\text{Equity capital}}$$

Equity capital stands for equity share capital *plus* all undistributed profits and reserves belonging to equity shareholders This ratio measures the profitability of the capital committed to the business by equity shareholders. Since business is conducted with a view to earn profit, return on equity capital measures the business success and managerial efficiency

(e) **Return on investment (ROI)** This is one of the key profitability ratios It helps to measure efficiency and provides a starting point to analyse the influences and trends in the company's performance. Return on investment is the percentage of profit to capital employed and is the product of two ratios : (*i*) percentage of profit to sales, and (*ii*) sales to capital employed, *i.e.*, the rate of asset turnover. Thus

$$\frac{\text{Profit}}{\text{Capital employed}} = \frac{\text{Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Capital employed}}$$

From the above it follows that a low return on investment is due to both, either falling profit margins and/or a low rate of assets turnover. So if profit margins cannot be improved due to strong domestic and international competition, the only other way to improve the return on investment is by increasing the rate of asset turnover, *i e* , by increasing productivity.

In an analysis of profitability if one wants to find out as to why productivity has gone down, it is necessary to calculate further ratios by splitting the capital employed into fixed assets and working capital as shown below :

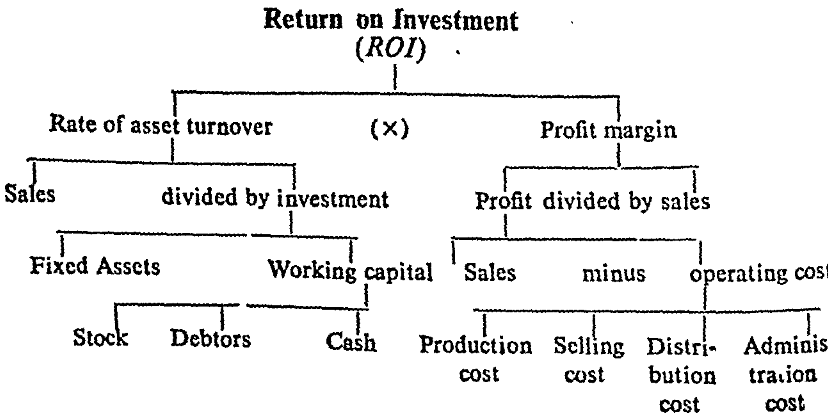
$$\frac{\text{Sales}}{\text{Fixed assets}} \text{ and } \frac{\text{Sales}}{\text{Working capital}}$$

The first one is called fixed assets turnover and the second one is called working capital turnover * The second ratio can be further split into ratios for debtors, stocks, work-in-progress, etc. Likewise to answer

* Refer to Sales Ratios—Vide FSA 37.

the question—Why has the profit margin gone down ?—the ratio of profit to sales can be analysed into various cost ratios such as production cost to sales, material cost to sales, labour cost to sales, administration cost to sales, selling cost to sales, etc. The total of the operating costs to sales is known as the operating ratio. This ratio measures the operating efficiency of the management. This ratio also measures the proportion of sales consumed by operating costs. The remaing sales would represent operating net profit. A further analysis of this ratio would give us the expense ratios. Therefore, the operating ratio, the net profit ratio and the expense ratios are all inter-connected. Higher the operating ratio, lower is the efficiency of the management. If the operating ratio is unfavourable, the net profit ratio cannot be favourable. It should, however, be cautioned here that in spite of a favourable operating ratio the return on investment may be lower and *vice versa*.

The following chart illustrates the inter-relationship of the several ratios discussed above :



The two sides of the pyramid ratios given in the chart are not independent of each other. Any increase in sales unaccompanied by increase in productivity or the selling price will lead to increase in the asset turnover as well as increased profit margin. This is because an increase in sales will not result in a proportionate increase in fixed costs and therefore results in higher profit margin than before.

Having discussed this important ratio threadbare, now we will have to understand the concept of capital employed and other terms used in the calculation of this ratio.

Return on Capital Employed

In day-to-day use, the term "capital employed" is used to indicate the total investment in the firm whether owned or borrowed. But, in technical sense, the term "capital employed" is used to describe more than one meaning. It can be used to describe the followings :

(*a*) *Gross capital employed.* When capital employed is used in this sense then it is equal to total of fixed assets and current assets.

(*b*) *Net capital employed.* When capital employed is used in this sense, it is equal to total of fixed assets and current assets as reduced by current liabilities. The main difference between gross capital employed and net capital employed is that in the latter case current liabilities are deducted from the total assets while in the former case there is no such deduction.

(*c*) *Proprietor's net capital employed.*[1] This is equal to total assets (fixed and current) less total outside liabilities (*i.e.*, current liabilities and long-term borrowings, *e.g.*, debentures). This can be calculated by another method also, that is, by adding all owned capital, whether equity or preference, and all accumulated reserves and profits. This can be further divided into two parts :

(*i*) Proprietor's equity net capital employed, and

(*ii*) Proprietor's preference net capital employed.

Methods of valuation. (1) It may be remembered that while calculating capital employed in any sense given above it is the replacement cost of asset (market value of asset) which is considered for the purpose of valuation and not the book values of asset. The argument in favour of replacement value is based on the following grounds :

(*i*) Valid inter company comparison is possible,

(*ii*) It gives the current value of assets employed,

(*iii*). Management's efficiency, if measured in terms of profits, can be best judged when market value of assets is considered,

(*iv*) It is in keeping with the accounting concept of conservatism.

(2) In order to calculate capital employed, it is better to exclude :

(*i*) Idle asset—when assets have not been used due to abnormal and unusual events, such as trade recession, fire, obsolescence. However, in order to let management know the real position of business this may not be excluded but this can be done outside the normal calculations of capital employed.

(*ii*) Intangible Assets—like Goodwill, Trade Mark, Patent Rights. However, if goodwill has been purchased then this may not be excluded.

(*iii*) Cash in excess of usual requirements is not capital employed. But what is the normal requirement is difficult to determine.

(*iv*) Money invested outside the business in the form of investment, etc., is to be excluded because in no way that money was available for employment in the business and does not reflect on the efficiency of the firm. However, if such investment is an integral part of business, it must not be excluded.

(*v*) Fictitious assets such as preliminary expenses, advertising, suspense account, discount on debentures and share capital should be excluded from capital employed.

(3) Out of the total of fixed and current assets—half of the current year's profit is to be deducted. This is based on the ground that on an

1. Mr. J C. Walker, FCA, prefers to use the term 'group capital' instead of Proprietor's Net Capital Employed. *The Accountant*, September 30, 1961.

average basis a company earns every day some profit and that profit is employed again in the business to earn further profits. As against the profit earned on 31st December, which cannot be employed the profit earned on January 1 can be employed for full year. Similarly while profits earned on 30th December, and 29th December can be employed for one day and two days respectively the profit earned on 2nd and 3rd January can be employed for 364 and 363 days. Therefore, it is better to imagine that on an average basis only half of the profits are employed for the full year and remaining half are kept idle. Since total assets shown on the assets side of balance sheet have already been inflated due to profits made during the year, therefore, only remedy is to reduce them now by one-half of the profits.

Calculation of profits to calculate return on capital employed. The definition of profit keeps on changing according to the meaning of capital employed. The philosophy is that :

(*i*) If some asset has been excluded from the calculation of amount of capital employed its income must also be deducted from profits. When asset is assumed to be not employed, it is not supposed to earn profits. For example, if investments are excluded from total assets, interest on investment must also be deducted from profits. Similarly, since fictitious assets and intangible assets are not included in capital employed, any amount written off on this account should be added back to profit to delete its effect.

(*ii*) If the capital employed is gross capital, *i.e.*, no liability is deducted. then interest paid on debentures or long-term liabilities and dividend paid on preference shares should be included in profits, *i.e.*, added back to profits.

If capital employed is used in the sense of preference net capital employed then debenture interest should be deducted from profits but not preference dividend.

If capital employed is calculated in the sense of net equity capital employed then both debenture interest and preference dividend should be deducted.

(*iii*) In general, profits calculated for any type of capital employed will not include abnormal and non-recurring gains or losses such as, gain or loss on sale of fixed assets, or from foreign exchange transactions, or from fire or legal disputes.

Purposes. 1. Its main purpose is to give a dependable measure of judging the over-all efficiency or inefficiency of the business. Rate of capital employed reveals how effectively the capital has been used. But when this measure is used in that case "capital employed" is used in the sense of "Gross capital employed".

2. It reflects on the company's borrowing policy. For example, the return on gross capital employed is 8% and company has borrowed money at 9%, then definitely company's borrowing policy is bad and they should depend upon owned capital unless it is impossible for them.

3. Return on equity capital employed is calculated to know the maximum rate of equity dividend.

(*f*) *Return on sales or Net profit ratio.* As stated earlier this ratio indicates what portion of sales is left to the proprietors after meeting all

expenses. It is calculated as

$$\frac{\text{Net Profit}}{\text{Net Sales}} \times 100$$

This ratio takes into account income from operations as well as investments. Therefore in order to judge the operating efficiency a subordinate ratio of operating net profit to net sales is calculated. This ratio must be adequate to give a reasonable return to the investors having regard to the risks of business.

It must be noted that this ratio must be used very carefully. A low *return on sales in a particular case may not mean that the company's profitability is low.* The following example illustrate this point

Example. Company *A* operates a supermarket, and Company *B* operates a department store. Operating results of each are summarised as under :

	A *Supermarket* Rs.		B *Department Stor* Rs	
Sales		1,00,000		1,00,000
Total investment		10,000		50,000
Net income		2,000		10,000
Return on sales	$\frac{2,000}{1,00,000}\times 100$	2%	$\frac{10,000}{1,00,000}\times 100$	10[illegible]
Return on investment	$\frac{2,000}{10,000}\times 100$	20%	$\frac{10,000}{50,000}\times 100$	2[illegible]

In can be seen that although return on sales in Company *A* [illegible] less than that of Company *B* the return on investment in Co [illegible] as high as in Company *B*

ANALYSIS FOR SHORT-TERM CREDITORS

This analysis is also called analysis for [illegible] company. Short-term creditors of the company [illegible] knowing the company's ability to pay [illegible] they become due. For this purpose [illegible] company's cash-generation power [illegible] in relation to its total current [illegible] total current assets as to be able to meet [illegible] liabilities and have something to meet day to day [illegible] business. Ratios calculated for this purpose [illegible]

(*i*) *Liquidity ratios.* Liquidity [illegible] ratio, and (*b*) acid test or quick ratio.*

(*ii*) *Movement of current assets.* [illegible] movement of current assets the following two ratios are calculated: (*a*) Stock turnover, and (*b*) Debtors turnover.

*Besides these there [illegible] This is measured by calculating the current assets [illegible] pay off the current liabilities [illegible] The current assets are taken [illegible] liquidity for this purpose [illegible] example, the current liabilities are R[illegible] and the [illegible] Book debts Rs 15,000 and [illegible] then the [illegible] cash, book debts and [illegible] of [illegible] pay off current liab[illegible] vulnerability of business is [illegible]

Analysis for Measuring Liquidity

Current ratio. The current ratio is calculated as follows :

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

This type of comparison establishes the ability of the business to m its short-term obligations and is, therefore, of particular significance short-term creditors. Although, seasonal character, speculative natu requirements of business in the light of credit period allowed and receiv trend in the business are some of the factors which go far to determine t limit of satisfactory margin of current assets over current liabilities, yet the absence of peculiar conditions prevailing in the business a '2 : 1' ra of current assets to current liabilities is treated as a satisfactory relation. T idea of having almost twice as much assets as liabilities is only to tide o the contingency loss on account of realisation of assets in order to m liabilities and leave some amount as working capital in the business. A one to one ratio would mean that the current creditors were financing t day-to-day operations in entirety. And any loss of current asset wou mean loss to current creditors. But even after the satisfactory margin current assets over current liabilities, the hard fact still remains that such ratio is subject to a margin of error to the extent that assets will be collect or liabilities will mature at irregular intervals. Although two for o current ratio is considered to be very satisfactory, as in the case of oth accounting ratios, it is necessary to consider the type of business concerne High ratios indicate inefficient use of capital which may be due to po investment policies of the management and poor inventory control. A l ratio of course indicates lack of liquidity and suggests a shortage working capital.

It may be noted that current ratio is susceptible to "windowdressin nd easy-way manipulations. An equal increase in both current assets a current liabilities would *decrease* current ratio and similarly equal decrea in current assets and current liabilities would *increase* current ratio. Th is clear from the following examples :

(*i*) Original Ratio is

$$=\frac{\text{Current assets (say) Rs. 3,00,000}}{\text{Current liabilities (say) Rs. 1,50,000}}=2:1$$

(*ii*) After purchasing goods worth Rs. 1,00,000 on credit basis 21st December both current assets (stock) and current liabilities (credito increase and ratio becomes :

$$=\frac{\text{Current assets (now) Rs. 4,00,000}}{\text{Current liabilities (now) Rs. 2,50,000}}$$

$=1{\cdot}6:1$. Therefore, ratio has declined.

(*iii*) But instead of purchasing goods if creditors are paid off by (sa Rs. 1,00,000 then ratio is :

$$=\frac{\text{Current assets (now left) Rs. 2,00,000}}{\text{Current liabilities (now left) Rs. 50,000}}$$

$=4:1$. Therefore, ratio has improved.

In computing the current ratio the analyst must be guarded and avo the following pitfalls :

(*i*) The inclusion of slow moving stock shows the ratio favourable. Such items must be omitted or adequately depreciated.

(*ii*) Similarly in respect of debtors, there must be adequate provision for bad and doubtful debts.

(*iii*) Resort to window-dressing on the eve of accounting date. This may be done in two ways : (*a*) Liquidate current liabilities to improve the ratio. (*b*) Carrying low stocks and allowing inventories to fall below normal levels. This is done with a view to defer the purchases until after the balance sheet date. By deferring such purchases the deterioration in current ratio can be avoided.

This ratio, apart from testing the solvency of a concern, is also used to judge the adequacy of the working capital. But the working capital requirements of an enterprise cannot be judged on the basis of this ratio alone. Working capital requirements also depend on such factors as the speed with which stock turnover and the promptness with which book debts are collected. Therefore, one should also take into account stock turnover ratio and ratio of turnover of debtors. A company requires less working capital if the stock and debts move with greater velocity and a blockade in either of them would necessitate additional working capital. This ratio is also used to find out over-trading or under-capitalisation on the part of the concern and is discussed at another place.

Acid test ratio or liquid ratio or quick ratio This is calculated as follows :

$$= \frac{\textbf{Quick current assets}}{\textbf{Current liabilities}}$$

$$= \frac{\textbf{Cash + Bills receivable + Debtors + Temporary investments}}{\textbf{Current liabilities}}$$

Sometimes many accountant [illegible] nk overdraft [illegible] manent way [illegible] But on the basis of conservatism it is always good to include bank overdraft in current liabilities. Stock is excluded from quick current assets because they must be sold first before they can be converted into cash. Prepaid expenses are also excluded from the list of quick assets because they are not expected to be converted into cash. Debtors are included in quick current assets after providing for bad and doubtful debts. Since only cash and quick selling assets are included in the list of liquid or quick assets, therefore, the danger of loss on realisation of assets is less and one-to-one ratio is indeed a very important index of short-term solvency of the business.

Even if a business has bright prospects, it may run into danger if it is not in a position to meet its current liabilities Hence the importance of this ratio. An analyst must know that window-dressing is possible even with respect to this ratio, by pressing debtors for payment and accelerating orders before the balance sheet date. The analyst should also note that although liquidity up to a point is desirable, too much liquidity may [illegible] an unwise use of funds which could be better employed. During [illegible] of boom this ratio is likely to be unfavourable, because increased [illegible] may lead to larger stocks and more debtors but less liquid [illegible] Conversely, during periods of slump the ratio may become favo[illegible] to disposal of stocks and realisation of book debts.

This ratio is only a variation of current ratio and measures the ability of the company to meet its pressing obligations. unlike the current ratio which is essentially a quantitative concept, the emphasis is on qualitative aspects in the calculation of this ratio. While this ratio no doubt provides a more stringentest of solvency, the financial analyst must consider this ratio together with the current ratio to test the short-term financial strength and solvency of the company.

Current Liabilities to Tangible Net worth. This ratio is expressed as :

$$= \frac{\textbf{Current liabilities}}{\textbf{Share capital} + \textbf{Reserves} + \textbf{Profit and loss account credit balances}}$$

A high ratio indicates overtrading which is the result of expanding volume of sales out of proportion to net tangible worth and the net working capital. The over-trading in such a case is possible only by building up heavy current liabilities and slight adverse circumstances like sudden falling prices may prove to be too critical and the concern may go into creditors' winding up.

Over-trading is also reflected in low current ratio, due to heavy current liabilities. It will also have a high turnover ratio due to expanded sales. The profitability of the company is again affected due to heavy interest payments on additional borrowings consequent to under-capitalisation. A low ratio indicates undertrading and over-capitalisation. The remedy lies in expansion and diversification of the business.

Activity Ratio—An analysis for measuring the movement of current assets

Both the current ratio and the acid test ratio will be misleading if debtors are too high because of slow credit collections. Similarly, the current ratio will be misleading if stock is too high because it is not being turned over (sold) as fast as it should be. Because liquidity ratios (*i.e.*, current ratio and acid test ratio) ignore the movement of current assets it is necessary for-short-term creditors to focus their attention on the analysis of policy for collection of debtors and turnover of stock.

Debtors turnover. Debtors, as used in this context, include bills receivable but excludes debts which are not on account of goods, *e.g.*, debtors arising out of sale of furniture will not be included in the list of debtors for this purpose. This is calculated as follows :

$$\textbf{Debtors turnover} = \frac{\text{Net sales}}{\text{Average debtors}}$$

Average debtors is calculated by dividing the sum of debtors in the beginning and at the end by 2.

After having calculated debtors turnover, it is necessary to calculate collection period. This is done as under :

$$\textbf{Collection period} = \frac{365}{\textbf{Debtors turnover}}$$

The collection period so calculated is compared with the credit period allowed and then conclusions are drawn.

Collection period can, alternatively, be calculated as under :

$$\frac{\textbf{Average debtors}}{\textbf{Net sales}} \times 365$$

Alternatively,

$$\text{Average of debtors} = \frac{\text{Average balance of book debts}}{\text{Average daily credit sales}}$$

$$\text{Average daily credit sales} = \frac{\text{Net credit sales}}{\text{365 days}}$$

$$\therefore \quad \text{Debtors turnover ratio} = \frac{\text{Average debtors}}{\text{Net sales}} \times 365$$

While calculating debtors turnover, it is important to remember that bad and doubtful debts are not deducted from total debtors so that it does not give a false impression that debtors have been collected quickly.

This ratio helps the financial manager to judge the adequacy or otherwise of working capital. It indicates the economy and efficiency with which book debts as a component of working capital are utilised. This ratio indicates the average time lag in number of days between sales and collection thereof. In other words, this ratio is a measure of the average credit period enjoyed by the customers. If the velocity slows down, it is an indication that the risk of collection of debts and cost of collection is increasing. Slow collection may be due to aging of debts. This ratio is favourable during periods of boom due to speedy realisation of debts. The opposite effects follow during periods of recession.

Some financial analysts prefer to take 300 days for the year after excluding Sundays and bank holidays. As the period of credit takes into account Sundays as well as bank holidays it is preferable to take 365 days for the purpose of calculating this ratio.

As the debtors' turnover ratio gives the average credit period enjoyed by customers, a comparison with the actual credit period allowed by the company as a matter of policy will reveal the efficiency with which the credit collection department is functioning in the particular organisation. Thus, if the average period of credit allowed is 40 days and the debtors' turnover ratio works out to 60 days, it means that there is laxity in the collection of book debts. It can, of course, also mean that the book debts include old and bad debts. Or the divergence may be due to a combination of both.

Stock turnover. How many times stock is purchased during the year is an important calculation because this depends on company's purchase policy. Buying in small lots results in repeated buying and buying in bulk results in infrequent buying. Though bulk buying gives various advantages of external and internal economies, it results in heavy carrying costs and blocking of funds thus limiting liquidity of the concern. Buying in small lots keeps funds quite free but results in the danger of going out of stock at any time and reduces the bargaining power of the company. *But high turnover of stock not necessarily means that the company buys in small lots. It may be either the company is efficient and sells it away quickly.* It means more profit for the company, since the company is able to secure more sales because of its efficient selling. It also means efficient utilisation of working capital and the stocks are fresh and not obsolete. Such a company can also enjoy a competitive advantage as it can operate on a small profit margin because of larger sales volume. A low inventory turnover indicates poor quality of merchandise, inefficient selling and [illegible]

capital. Excessive inventories which are the cause for a low inventory turnover result in heavy losses due to obsolescence, changes in style and fluctuations in prices.

It is calculated as under :

$$\frac{\textbf{Cost of goods sold}}{\textbf{Average stock held during the year}}$$

Average stock held is calculated by adding stock in the beginning and at the end of the year and dividing it by 2.

Inventory to net working capital. This ratio supplements the stock turnover ratio. This ratio helps to judge the quantum of inventories in relation to size of the business. Heavy inventories can lead to failure of business in the event of prices of such inventories crashing. It is only by buying the proper quantities and under favourable market conditions that the business can succeed. So each business must establish a fixed relationship between the inventory and the net working capital. The ratio is expressed as :

$$\frac{\textbf{Ending inventory}}{\textbf{Net working capital}}$$

Net sales to Net Working Capital. This ratio is expressed as :

$$\frac{\textbf{Net sales}}{\textbf{Net working capital}}$$

This ratio is considered along with the ratio of net sales to net worth. A high ratio indicates the presence of overtrading and the need for additional funds. A low ratio, on the other hand, indicates undertrading and the presence of more funds which cannot be put to reasonable use. If the ratio is high, the situation can be remedied by introducing additional capital, ploughing back of profits over a period and reducing the volume of business, particularly that component which promises to be temporary.

LEVERAGE RATIOS—AN ANALYSIS FOR LONG-TERM CREDITORS

Long-term creditors include debentureholders, vendors selling equipments on instalment basis, and other financiers supplying long-term loans. Long-term creditors are primarily interested in whether the company has ability to pay regularly interest due to them and to repay the principal at the maturity date. In order to test the solvency of the concern from their point of view the following ratios are calculated :

Net income to debt service ratio. Here 'net income' stands for net income before charging income-tax and interest on long-term debts and 'debts service' stands for interest on long-term debts. This ratio is calculated as follows :

$$\frac{\textbf{Net income before charging interest and income-tax}}{\textbf{Periodic interest on long-term debts}} = \textbf{Number of times fixed charges earned}$$

If particulars are taken as follows :

Net income as per profit and loss account	Rs. 35,000
Income tax deducted	15,000
Interest on debentures deducted	12,500

This measure is helpful to assess the soundness of long-term financial policies and determines the relative stake of outsiders and shareholders in the company. For this purpose debt means long-term loans and liabilities. Redeemable preference shares are also taken as debt.

Debt ratio. This ratio compares the total liabilities to total assets and is expressed thus :

$$\frac{\textbf{Total liabilities}}{\textbf{Total assets}}$$

This ratio also indicates the extent of trading on equity and measures the percentage of assets financed through borrowing.

Shareholders' equity to fixed assets. Normally it is the duty of shareholders to finance the purchase of fixed assets of the company. Therefore, shareholders' equity (share capital + reserves and funds) should be equal to fixed assets, *i.e.*, ratio should be 1 : 1. If assets are more than shareholders' equity then it shows that some fixed assets are financed out of borrowed capital and any withdrawal of borrowed capital by the lenders will put the company in difficulties. Coverage of fixed assets by shareholders' equity is a good test of long-term solvency. A business where the fixed assets are not covered by tangible net worth may not have a chance to survive. In fact the tangible net worth of the company must be more than the fixed assets so that a portion of the working capital is provided from permanent owned funds. Sometimes a deviation is made in the above ratio. Instead of having only shareholders' equity long-term loans are also included to see the solvency of the concern. This is because in certain types of businesses where large properties are held, it is quite usual for secured loans to cover a large proportion of the fixed assets.

SOME PRINCIPAL TERMS

"Gearing" of Capital

The relation of equity capital (including all reserves and undistributed profits as may be regarded the share of equity shareholders) to preference share capital and other types of fixed interest bearing loans is described as "capital gearing". In other words, the technique of raising finances for the company by resorting to fixed interest or dividend carrying securities is called "gearing" the capital. Therefore, if company collects capital by issuing debentures, or preference shares, or by inviting public debts, which bear fixed rate of interest, the company is said to have "geared" the capital. Gearing is said to be high if capital carrying fixed rate of interest or dividend is more than the equity capital. Similarly, gearing is low if capital carrying fixed rate of interest or fixed rate of dividend is less than the equity capital. It may be repeated that equity capital for this purpose stands for equity share capital plus all undistributed profits and reserves. From the following example the idea of high and low gearing can be made more clear :

	Low gearing	High gearing
Equity share capital	Rs. 15,00,000	Rs. 6,00,000
8% Preference share capital	4,00,000	4,00,000
7½% Redeemable preference share capital	1,00,000	8,00,000
7% Debentures	3,00,000	4,00,000
General reserves	1,00,000	1,00,000
Profit and loss appropriation account	—	1,00,000
	Rs. 24,00,000	Rs. 24,00,000
Gearing ratio	16 : 8	8 : 16
	2 : 1	1 : 2

Whether or not high gearing ratio is good for the company will lepend upon the circumstances of the case. A high gearing may result in ome benefit to equity shareholders, where the rate of interest/dividend on ixed interest/dividend securities is lower than the rate of return on investnent in business and the company is said to be trading on the equity. In he case of loan capital, there is the benefit of tax shield, because interest [illegible] purpose of as- [illegible] effective rate [illegible] Thus, if 16% nterest is paid on loan capital, the net rate after taking into account the ax shield works out to 8% only. This is illustrated below.

llustration 8. *A* Ltd makes a profit of Rs. 1,00,000 before taxes and efore providing for 16% interest on loan capital of Rs. 2,00,000 taken rom Tamilnadu Industrial Investment Corporation (SFC). If the corporate ax is 50%, calculate the effective rate of interest paid by *A* Ltd.

Solution :

	Rs.
(A) When there is no loan capital :	
Profits made by *A* Ltd as given	1,00,000
Corporate tax at 50% of the profits	50,000
Profits after tax	50,000

	Rs.
(B) In view of the loan capital :	
Profits before interest and tax	1,00,000
Less : Interest on loan caqital	32,000
Profits after interest but before tax	Rs. 68,000
Less : Corporate tax at 50% of the profits	34,000
Profits after interest and taxes	34,000

(C) Interest payable to T.I.I.C.	Rs. 32,000
Less : Amount saved due to tax shield (Rs. 50,000—Rs. 34,000)	16,000
Effective interest paid	Rs. 16,000

(D) Effective rate of interest payable :

$$= \frac{\text{Rs. } 16{,}000}{\text{Rs. } 2{,}00{,}000} \times 100$$
$$= 8\%.$$

If in the above illustration the amount is raised by way of preference share capital, the preference dividend paid will be treated on an appropriation of profit and, therefore, the burden of payment of dividend would be 16% as against 8% in the case of loans. Therefore, external borrowings constitute a cheaper source of capital employed and enable the organisation to trade on equity. How trading on equity helps the equity shareholders is illustrated below. This is generally done with the help of EBIT (Earnings before interest and taxes)-EPS (Earnings per share) analysis. Whether the trading on equity or the financial leverage is favourable or not is judged by its effect on earnings per share to equity shareholders.

Illustration 9. It is proposed to start a business requiring a capital of Rs. 10,00,000 and an assured return of 15% on investment. Calculate the earnings per share (EPS) (*i*) if the entire capital is raised by means of Rs. 100 equity shares, and (*ii*) if 50% is raised as under (*i*) and the balance by means of 10% debentures.

Solution :

	Case I	*Case II*
EBIT	Rs. 1,50,000	Rs. 1,50,000
Interest	—	50,000
Earnings before taxes	1,50,000	1,00,000
Taxes, say, at 50%	75,000	50,000
Earnings after interest and taxes	75,000	50,000
No. of equity shares	10,000	5,000
Earnings per share	Rs. 7·5	Rs. 10·0

In the above illustration since the return on investment is more than the interest payable on debentures, the effect of financial leverage on EPS is positive. Negative leverage occurs when the ROI is less than the interest payable on the borrowing. Financial managers decide the debt equity combination depending on the EPS as suggested by different combinations. It must also be said here that although financial leverage offers advantages to equity holders, it is risky to have it, as interest is a fixed charge and has to be met whether or not a company is making profits. Moreover, loans can be raised only on the basis of security and periodic interest payments affect the liquid resources of the company. Therefore, it would be prudent for the financial management to decide the extent of gearing having regard to the several factors like profitability, interest rate and financial risks involved.

A financial analyst can understand the extent of gearing by calculating capital-gearing ratio. This ratio is expressed as

$$\frac{\text{Equity capital}}{\text{Fixed interest/dividend bearing securities}}$$

A large proportion of debentures and/or preference shares to equity shares indicates high gearing. If there is a high proportion of equity capital in relation to debentures and preference shares, it is a case of low gearing. Some analysts also add surpluses and retained earnings to the equity capital to calculate this ratio.

Illustration 10. From the capital structures of *A* Ltd and *B* Ltd given below comment on the capital gearing of the two companies :

	A Ltd	*B Ltd*
Equity share capital	Rs. 10,00,000	Rs. 6,00,000
Preference share capital	2,00,000	4,00,000
Debentures	—	2,00,000
General reserves	5,00,000	5,00,000

Solution :

Capital-gearing ratios :

$$A\ Ltd: \frac{15,00,000}{2,00,000} = 15:2$$

$$B\ Ltd: \frac{11,00,000}{6,00,000} = 11:6$$

From the above calculations it is clear that the capital of *A* Ltd is low geared while that of *B* Ltd is high geared.

Overtrading

Overtrading is a curse to the business. It squeezes the potentialities of the business and brings it to the stage of insolvency. Overtrading is the result of excessive sales. The decision of accepting excessive orders compels [illegible] d engage more workers [illegible] longer than the usual [illegible] many processes through which the raw material has to pass, before coming as finished products, blocks the stock of goods in the pipeline and business is caught in the trap. On the one hand, the necessity of cash increases in order to make [illegible] material into finished products and then ultimately selling them in the market. Under the circumstances, forced sale of stock is the only remedy [illegible] the current obligations. Pointing out the [illegible] Rose has rightly remarked : "The danger [illegible] words, in attempting the expansion of a business without an adequate background of liquid capital—is that the management dazzled by the opportunity offered by the market and the profits undoubtedly being made, do not appreciate that the cash return during the expansion period inevitably lags behind expenditure."*

Over-trading can be indicated from the following tests :

(*a*) Increasing tendency of total trade creditors.

(*b*) Piling of stock.

(*c*) Reduction in turnover.

* *The Internal Finance of Industrial Undertaking*, Pitman, London.

(*d*) Comparison of credit period taken with the normal credit period allowed in that trade. *If the credit period taken is more than normally allowed, it is definitely an index of poor cash position and, consequently, over-trading.*

(*e*) Ratio of sales to share capital or total net worth. If sales are *too large in relation to capital then the business is said to be in the grip of over-trading.*

(*f*) Ratio of sales to working capital. If sales are too high in comparison to working capital *current ratio is distorted and results in over-trading.*

Under-trading generally hints at inadequate volume of business. This is due to underemployment of assets of the business, leading to the fall of sales and results in financial crisis. This makes the business unable to meet its commitments and ultimately leads to forced liquidation.

Over and under-capitalisation

Any firm, in order to carry on business, collects money from two sources, *viz.*, owners and creditors. *In the interests of prudent financial* management it is imperative that a proper balance between these two capitals (*i.e.*, owned capital and borrowed capital) be kept. Any imbalance will be termed either under-capitalization or over-capitalization.

Under-capitalisation. If the owned capital of the business is much *less than the total borrowed capital then it is a sign of under-capitalisation.* This means that the owned capital of the business is disproportionate to the scale of its operation and hence the business is dependent upon borrowed money and *trade creditors. Under-capitalisation may be the result of* overtrading. It must be distinguished from high gearing, as in the latter case *there is a comparison between equity* capital and fixed-interest-bearing capital (which includes preference share capital also and excludes trade creditors) whereas in the former case the comparison is between total owned capital (both equity and preference share capital) and total borrowed capital (which includes trade creditors also).

Under-capitalisation is indicated by :

(*a*) **Low proprietary ratio,**

(*b*) **Low current ratio,**

(*c*) High return on equity capital, or on proprietor's funds.

The effects of under-capitalisation may be :

(*a*) payment of excessive interest on borrowed capital,

(*b*) use of out-of-date appliances and equipments because of inability to purchase new plant, etc.,

(*c*) high cost of production because of the use of old machines and excessive interest on loans *and high cost of purchase because of extra credit demanded on purchases.*

Over-capitalisation. A concern is said to be over-capitalised if its earnings are not sufficient to justify a fair return on the amount of share capital and debentures that have been issued. It is also said to be over-

capitalised when total of owned and borrowed capital exceeds its fixed and current assets, *i.e.*, when it shows accumulated losses on the assets side of the balance sheet.

Over-capitalisation can be remedied by reducing its capital so as to obtain a satisfactory relationship between proprietors' funds and net profits. In case over-capitalisation is the result of over-valuation of assets then it can be remedied by bringing down the value of assets to their proper value.

Functional classification of ratios. All the ratios discussed previously can be classified on the basis of their functions as follows :

1. Liquidity Ratios :
   (*a*) Current ratio
   (*b*) Acid test ratio

2. Solvency ratios :
   (*a*) Current ratio
   (*b*) Acid test ratio
   (*c*) Equity ratio
   (*d*) Debt ratio
   (*e*) Debt-equity ratio
   (*f*) Net income to debt service ratio

3. Profitability ratios :
   (*a*) Gross profit ratio
   (*b*) Net profit ratio
   (*c*) Return on equity
   (*d*) Return on investment
   (*e*) Return on net worth

4. Activity ratios :
   (*a*) Inventory turnover
   (*b*) Debtors turnover
   (*c*) Fixed assets turnover
   (*d*) Working capital turnove r

5. Leverage ratios :
   (*a*) Debt ratio
   (*b*) Net income to debt service ratio
   (*c*) Debt equity ratio
   (*d*) Proprietary ratio

6. Financial ratios :
   (*a*) Fixed assets ratio
   (*b*) Capital gearing ratio
   (*c*) Debt-equity ratio
   (*d*) Current ratio
   (*e*) Liquidity ratio

The classification given above would help students to work out problems which do not specify the individual ratios to be worked out but the student is asked to calculate a particular group such as solve ncy ratios, leverage ratios, etc.

The table given below would also help students to calculate the required ratios in a given problem :

Objective of analysis	*Ratios to be computed*
1. Short-term financial solvency	(*a*) Current ratio (*b*) Liquidity ratio
2. Long-term financial solvency	(*a*) Equity or proprietary ratio (*b*) Debt ratio (*c*) Debt-equity ratio (*d*) Shareholders equity to total equity ratio
3. Immediate solvency	(*a*) Liquidity ratio

4. Overall efficiency	(*a*) Return on investment (*b*) Operating ratio (*c*) Assets turnover and other turnover ratios (*d*) Return on proprietors' equity (*e*) Earnings per share
5. Profitability in relation to sales	(*a*) Gross profit ratio (*b*) Net profit ratio
6. Profitability in relation to investment	(*a*) Return on investment (*b*) Return on proprietor's equity (*c*) Earnings per share
7. Over-trading or under-trading	(*a*) Proprietary ratio (*b*) Current ratio (*c*) Stock turnover ratio
8. Trading on equity	(*a*) Capital gearing ratio
9. Over-capitalisation and under-capitalisation	(*a*) Proprietary ratio (*b*) Current ratio (*c*) Return on equity capital
10. Operating efficiency	(*a*) Operating ratio (*b*) Expense ratios

Ratios for diagnosing insolvency

A reference has already been made to the predictive power of ratios. In recent years ratios have been increasingly used for the early diagnosis of insolvency, so that remedial action can be taken in time to thwart the same. The ratios which are used for the purpose are listed below :

(1) Profit before tax to current liabilities.
(2) Current assets to total liabilities.
(3) Current liabilities to total tangible assets.
(4) No credit interval which is the ratio of working capital t operating costs excluding depreciation.

These ratios have been used in advanced countries with a fair amoun of success. However, like other ratios these also suffer from numerou limitations and an analyst must be guarded in making use of these ratios.

2—SOLVED PROBLEMS

Illustration 11. The following is the trading and profit and loss account c Ram Sons (Pvt.) Ltd for the year ended June 30, 1974 :

		Rs.			Rs
To Stock-in-hand		76,250	By Sales		5,00,00
To Purchases		3,15,250	By Stock in hand		98,50
To Carriage and freight		2,000			
To Wages		5,000			
To Gross profit		2,00,000			
	Rs.	5,98,500		Rs.	5,98,50
To Administrative expenses		1,01,000	By Gross profit		2,00,00
To Finance expenses :			By Non-operating incomes :		
Interest	1,200		Interest on security	1,500	
Discount	2,400		Dividend on shares	3,750	
Bad debts	3,400		Profit on sale of shares	750	
		7,000			6,00

To Selling and distribution expenses		12,000		
To Non-operating expenses :				
Loss on sale of securities	350			
Provision for legal suit	1,650			
		2,000		
To Net profit		84,000		
		Rs. 2,06,000		Rs. 2,06,000

You are required to calculate : (*a*) Expense ratio, (*b*) Gross profit ratio, (*c*) Net profit ratio, (*d*) Operating net profit ratio, (*e*) Operating ratio, and (*f*) Stock turnover.

Solution :

(*a*) **Expense ratios**

(*i*) $\frac{\text{Administration expenses}}{\text{Sales}}=\frac{\text{Rs. }1{,}01{,}000}{\text{Rs. }5{,}00{,}000}\times 100=20\ 2\%$

(*ii*) $\frac{\text{Finance expenses}}{\text{Sales}}=\frac{\text{Rs. }7{,}000}{\text{Rs. }5{,}00{,}000}\times 100=1\cdot40\%$

(*iii*) $\frac{\text{Selling and distribution expenses}}{\text{Sales}}=\frac{\text{Rs. }12{,}000}{\text{Rs. }5{,}00{,}000}\times 100=2\cdot40\%$

(*iv*) $\frac{\text{Non-operating expenses}}{\text{Sales}}=\frac{\text{Rs. }2{,}000}{\text{Rs. }5{,}00{,}000}\times 100=0\cdot4\%.$

(*b*) **Gross profit ratio**

$\frac{\text{Gross profit}}{\text{Sales}}=\frac{\text{Rs. }2{,}00{,}000}{\text{Rs. }5{,}00{,}000}\times 100=40\%.$

(*c*) **Net profit ratio**

$\frac{\text{Net profit}}{\text{Sales}}=\frac{\text{Rs. }84{,}000}{\text{Rs. }5{,}00{,}000}\times 100=16\cdot80\%.$

(*d*) **Operating net profit ratio**

Operating net profit = Net profit + Non-operating expenses − Non-operating incomes
= Rs. 84,000 + Rs. 2,000 − Rs. 6,000 = Rs. 80,000

$\therefore$ Ratio $=\frac{\text{Operating net profit}}{\text{Sales}}\times 100=\frac{\text{Rs. }80{,}000}{\text{Rs. }5{,}00{,}000}\times 100=16\%$*.

(*e*) *Operating ratio*

This is an expression of the cost of goods sold plus all other operating expenses to net sales. This is calculated as follows :

Stock in the beginning	Rs.	76,250
Add : Purchases		3,15,250
Add : Direct expenses (Rs. 2,000 + Rs. 5,000)		7,000
		3,98,500
Less Stock in hand at the end		98,500

* It may be noted that operating ratio together with the operating net profit ratio will be equal to 100%.

Cost of goods sold		3,00,000
Add : All operating expenses :		
Administration expenses	1,01,000	
Finance expenses	7,000	
Selling and distribution expenses	12,000	
		1,20,000
Total cost of operation	Rs.	4,20,000

$$\text{The operating ratio} = \frac{\text{Rs. } 4,20,000}{\text{Rs. } 5,00,000} \times 100 = 84\%^{*}.$$

(*f*) **Stock turnover**

Stock at the beginning	Rs.	76,250
Add : Stock at the end		98,500
Total Stock	Rs.	1,74,750
∴ Average stock $\left(\frac{\text{Rs. } 1,74,750}{2}\right)$		87,375

$$\text{Stock turnover} = \frac{\text{Cost of goods sold}}{\text{Average stock}} = \frac{\text{Rs. } 3,00,000}{\text{Rs. } 87,375} = 3{\cdot}43 \text{ times.}$$

Illustration 12. M/s Raj and Sons Ltd present you the following :

BALANCE SHEET

As at 31st December, 1977

		Rs.		Rs.
Equity share capital		50,000	Fixed assets	87,500
8% Preference share capital		10,000	Investments	25,000
Reserve fund		40,000	Stock	30,000
6% Debentures		20,000	Sundry debtors	13,500
Sundry creditors		30,000	Bank balance	7,000
Profit and loss account			Preliminary expenses	8,000
1976	1,000			
1977	20,000			
		21,000		
	Rs.	1,71,000	Rs.	1,71,000

The directors intend to transfer a sum of Rs. 5,000 out of the current year profits to provision for tax.

You are required to calculate the following ratios :

(*a*) Return on capital employed ratio

(*b*) Current ratio

(*c*) Fixed assets to net worth

(*d*) Debt to equity capital

(*e*) Return on owner's capital. **(M. Com., Nagpur April, 1978)**

* It may be noted that operating ratio together with the operating net profit ratio will be equal to 100%.

Solution :

Raja & Sons Limited

Working capital :		
Current assets :		
Bank balance	Rs. 7,000	
Sundry debtors	13,500	
Stock	30,000	
Investments*	25,000	
		75,500
Less : Current liabilities		
Sundry creditors	30,000	
Provision for taxation	5,000	
		35,000
Working capital		40,500
Fixed assets		87,500
Total funds (capital) employed		1,28,000
Less : 6% Debentures		20,000
Shareholders' equity		1,08,000
Represented by :		
Equity share capital		50,000
Preference share capital		10,000
Reserves		40,000
Profit and Loss A/c balance		8,000†
		Rs. 1,08,000

(a) *Return on capital employed ratio*

Net profit for 1977		Rs. 20,000
Add : Interest on debentures		1,200
	Total	21,200
Less : Provision for tax		5,000
Adjusted profits after tax		Rs. 16,200

$$\text{Return}=\frac{16,200}{1,28,000}\times 100=12{\cdot}7\%.$$

Note. It is presumed that the provision for taxation is sufficient to discharge tax liability.

(b) *Current ratio*

$$\frac{\text{Current asset}}{\text{Current liabilities}}=\frac{75,500}{35,000}=2{\cdot}16:1$$

* Presumed to be temporary investments.

† P & L A/c balance less preliminary expenses provision for taxation.

Cost of goods sold		3,00,000
Add : All operating expenses :		
Administration expenses	1,01,000	
Finance expenses	7,000	
Selling and distribution expenses	12,000	
		1,20,000
Total cost of operation		Rs. 4,20,000

$$\text{The operating ratio} = \frac{\text{Rs. } 4{,}20{,}000}{\text{Rs. } 5{,}00{,}000} \times 100 = 84\%^*.$$

(*f*) **Stock turnover**

Stock at the beginning	Rs.	76,250
Add : Stock at the end		98,500
Total Stock	Rs.	1,74,750

$$\therefore \text{ Average stock } \left(\frac{\text{Rs. } 1{,}74{,}750}{2}\right) \qquad 87{,}375$$

$$\text{Stock turnover} = \frac{\text{Cost of goods sold}}{\text{Average stock}} = \frac{\text{Rs. } 3{,}00{,}000}{\text{Rs. } 87{,}375} = 3{\cdot}43 \text{ times.}$$

Illustration 12. M/s Raj and Sons Ltd present you the following :

BALANCE SHEET

As at 31st December, 1977

		Rs.		Rs.
Equity share capital		50,000	Fixed assets	87,500
8% Preference share capital		10,000	Investments	25,000
Reserve fund		40,000	Stock	30,000
6% Debentures		20,000	Sundry debtors	13,500
Sundry creditors		30,000	Bank balance	7,000
Profit and loss account			Preliminary expenses	8,000
1976	1,000			
1977	20,000			
		21,000		
	Rs.	1,71,000	Rs.	1,71,000

The directors intend to transfer a sum of Rs. 5,000 out of the current year profits to provision for tax.

You are required to calculate the following ratios :

(*a*) Return on capital employed ratio

(*b*) Current ratio

(*c*) Fixed assets to net worth

(*d*) Debt to equity capital

(*e*) Return on owner's capital. (M. Com., Nagpur April, 1978)

* It may be noted that operating ratio together with the operating net profit ratio will be equal to 100%.

Solution :

Raja & Sons Limited

Working capital :			
Current assets :			
Bank balance	Rs	7,000	
Sundry debtors		13,500	
Stock		30,000	
Investments*		25,000	
			75,500
Less : Current liabilities			
Sundry creditors		30,000	
Provision for taxation		5,000	
			35,000
Working capital			40,500
Fixed assets			87,500
Total funds (capital) employed			1,28,000
Less : 6% Debentures			20,000
Shareholders' equity			1,08,000
Represented by :			
Equity share capital			50,000
Preference share capital			10,000
Reserves			40,000
Profit and Loss A/c balance			8,000†
		Rs.	1,08,000

(*a*) *Return on capital employed ratio*

Net profit for 1977	Rs.	20,000
Add : Interest on debentures		1,200
	Total	21,200
Less : Provision for tax		5,000
Adjusted profits after tax	Rs.	16,200

$$\text{Return} = \frac{16,200}{1,28,000} \times 100 = 12{\cdot}7\%.$$

Note. It is presumed that the provision for taxation is sufficient to discharge tax liability.

(*b*) *Current ratio*

$$\frac{\text{Current asset}}{\text{Current liabilities}} = \frac{75,500}{35,000} = 2{\cdot}16 : 1$$

* Presumed to be temporary investments.

† P & L A/c balance less preliminary expenses provision for [illegible]

Sales ratios

1. Sales to fixed assets = Sales : Fixed assets
= Rs. 3,00,000 : Rs. 3,85,000 = 60 : 77

Whether this ratio is satisfactory or not will be determined by comparing it either with standard ratio or with some ratio prevalent in that industry. Goodwill is included in fixed assets.

2. Sales to working capital = Sales : Working capital
= Sales : (Current assets − Current liabilities)
= Rs. 3,00,000 : (Rs. 1,72,000 − Rs. 1,37,000)
= 3,00,000 : 35,000 = 60 : 7

Again, comment on suitability of ratio can be made only after comparing this ratio with other standard ratio.

Illustration 14. *A* Ltd has a current ratio of 4·5 to 1 and liquidity ratio of 3 to 1. If its merchandise inventory is Rs. 24,000, find out the total current liabilities.

Solution :

Current ratio	4·5 : 1
Liquidity ratio	3·0 : 1
∴ Inventory to current liabilities	1·5 : 1

$$\text{Current liabilities} = \frac{24{,}000}{1{\cdot}5} \times 1 = \text{Rs. } 16{,}000.$$

Illustration 15. *B* Ltd has a liquidity ratio of 2 to 1. If its merchandise inventory is Rs. 15,000 and total current liabilities are Rs. 30,000, ascertain the current ratio.

Solution. As per the liquidity ratio for every Re. 1 of liability, there are Rs. 2 of liquid assets.

∴ Liquid assets (Rs. 30,000 × 2)	Rs.	60,000
Add : Merchandise inventory		15,000
Total of current assets	Rs.	75,000

$$\text{Current ratio} = \frac{\text{Rs. } 75{,}000}{\text{Rs. } 30{,}000} = 2{\cdot}5 : 1.$$

Illustration 16. Following are the ratios relating to the trading activities of National Traders Ltd :

Debtor's velocity	3 months
Stock velocity	8 months
Creditors' velocity	2 months
Gross profit ratio	25 per cent

Gross profit for the year ended 31st December, 1973 amounts to Rs. 4,00,000. Closing stock of the year is Rs. 10,000 above the opening stock. Bills receivable amount to Rs. 25,000 and bills payable to Rs. 10,000.

Find out : (*a*) Sales, (*b*) Sundry debtors, (*c*) Closing stock and (*d*) Sundry creditors. [C.A. (Final) May, 1974]

Solution.

(*a*) $\text{G.P. Ratio} = \dfrac{\text{Gross profit}}{\text{Sales}}$

$$\therefore \quad \text{Sales} = \frac{\text{Gross profit}}{\text{G.P. ratio}}$$

$$= \frac{\text{Rs. } 4{,}00{,}000}{25} \times 100$$

$$= \text{Rs. } 16{,}00{,}000.$$

(*b*) $\text{Debtors velocity} = \dfrac{\text{Debtors}}{\text{Sales}} \times 12$

$$\therefore \quad \text{Debtors} = \frac{\text{Sales} \times \text{Debtors velocity}}{12}$$

$$= \frac{16{,}00{,}000 \times 3}{12}$$

$$= \text{Rs. } 4{,}00{,}000$$

As debtors for this ratio include bills receivable, the book debts amount to Rs. 4,00,000 − Rs 25,000 = Rs. 3,75,000.

(*c*) $\text{Stock velocity} = \dfrac{\text{Cost of goods sold}}{\text{Average stock}} \times 12$

$$\text{Average stock} = \frac{\text{Cost of goods sold} \times \text{stock velocity}}{12}$$

Cost of goods sold = Sales − G.P.

= Rs. 16,00,000 − Rs. 4,00,000 = Rs. 12,00,000

$$\text{Average stock} = \frac{12{,}00{,}000 \times 8}{12} = \text{Rs. } 8{,}00{,}000$$

It x is assumed to be the opening stock, x + Rs 10,000 would be the closing stock.

$$\therefore \quad \text{Average stock} = \frac{x + x + 10{,}000}{2}$$

$$\text{Opening stock } (x) = \frac{\text{Average stock} \times 2 - 10{,}000}{2}$$

$$= \frac{8{,}00{,}000 \times 2 - 10{,}000}{2} = \text{Rs } 7{,}95{,}000$$

Closing stock = Rs 7,95,000 + Rs 10,000 = Rs 8,05,000

(*d*) $\text{Creditor's velocity} = \dfrac{\text{Total creditors}}{\text{Purchases}} \times 12$

$$\therefore \quad \text{Creditors} = \frac{\text{Purchases} \times \text{creditors velocity}}{12}$$

Purchases = Cost of goods sold + closing stock − opening stock

= Rs 12,00,000 + 8,05,000 − 7,95,000 = Rs 12,10,000

$$\text{Creditors} = \frac{12,10,000 \times 2}{12} = \text{Rs. } 2,01,667$$

As creditors for this ratio include bills payable

Trade creditors=Rs. 2,01,667 − Rs. 10,000=Rs. 1,91,667.

Illustration 17. Following is the balance sheet of *X* Ltd on 31st December, 1974 :

Liabilities			Rs.	*Assets*	Rs.
Equity share capital			20,000	Goodwill	12,000
Capital reserves			4,000	Fixed assets	28,000
8% Loan on mortgage			16,000	Stocks	6,000
Trade creditors			8,000	Debtors	6,000
Bank overdraft			2,000	Investments	2,000
Taxation : Current			2,000	Cash in hand	6,000
Future			2,000		
Profit and loss account :					
Profit 1974 after taxation and interest on fixed deposits		12,000			
Less : Transfer to :					
Reserves	4,000				
Dividend	2,000				
		6,000			
			6,000		
			Rs. 60,000		Rs. 60,000

Sales amounted to Rs. 1,20,000. Calculate ratios for : (*a*) testing liquidity, (*b*) testing solvency, and (*c*) testing profitability.

Solution :

Test of Liquidity

1. *Current ratio*

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$= \frac{\text{Stock} + \text{Debtors} + \text{Investments} + \text{Cash}}{\text{Creditors} + \text{Bank overdraft}^* + \text{Provision for current taxation}}$$

$$= \frac{\text{Rs. } 20,000}{\text{Rs. } 12,000} = 5 : 3$$

Current ratio is reasonably good because current assets are almost double the current liabilities.

2. *Quick ratio*

$$\text{Quick ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

* Many accountants do not include bank overdraft in the current liability on the ground that arrangement with the bank regarding the bank overdraft is "permanent". Though this argument is substantially true yet the fact remains that this facility can be cancelled by the bank at any time and in keeping with convention of "conservatism", the inclusion of bank overdraft in current liability seems to be reasonable.

$$=\frac{\text{Debtors}+\text{Investments}+\text{Cash in hand}}{\text{Creditors}+\text{Bank overdraft}+\text{Provision for current taxation}}$$

$$=\frac{\text{Rs. } 14{,}000}{\text{Rs } 12{,}000}=7:6=1{\cdot}2:1.$$

If quick ratio is 1 : 1 then position is said to be satisfactory. In this case it is more than one and hence liquidity of the company is sound.

TEST OF SOLVENCY

Although test of liquidity is the test of solvency, yet solvency normally stands for the ability to meet *all* outside liabilities out of *all* assets. Therefore,

$$\textit{Solvency ratio}=\frac{\text{Total assets}}{\text{Total outside liabilities}}=\frac{\text{Rs. } 60{,}000}{\text{Rs. } 28{,}000}=\frac{15}{7}$$

$$=15:7=2{\cdot}2:1$$

Total liabilities are covered more than twice and, hence, solvency of the company is certain. In liabilities provision for future taxation is not included and in total assets goodwill is included only on the presumption that, if sold, it will realise that much of the amount. Goodwill appears in the balance sheet only when company has paid for it. In emergency it can also find market for it.

TEST FOR PROFITABILITY

The following tests have been carried out : (*a*) Return on total assets, (*b*) Return on total investment employed, (*c*) Return on shareholders' funds. Other profitability ratios based on sales have notbeen calculated because of lack of information.

(*a*) *Return on total assets* :

$$\text{Return on total assets}=\frac{\text{Income before tax \& interest on fixed liability}}{\text{Total assets}}\times 100$$

$$=\frac{\text{Rs } (6{,}000+2{,}000+2{,}000+1{,}280)}{\text{Rs } 60{,}000}\times 100$$

$$=\frac{\text{Rs } 11{,}280}{\text{Rs. } 60{,}000}\times 100=18{\cdot}8\%$$

This return can be compared with general return in the market and accordingly conclusions can be drawn.

(*b*) *Return on gross capital employed* :

$$\text{Return on gross capital employed}=\frac{\text{Income before tax and interest on fixed liabilities}}{\text{Shareholders' funds}+\text{Fixed liabilities}}\times 100$$

$$=\frac{\text{Rs. } 11{,}280}{\text{Rs. } (20{,}000+4{,}000+2{,}000+6{,}000+16{,}000)}\times 100$$

$$=\frac{\text{Rs. } 11{,}280}{\text{Rs. } 48{,}000}\times 100=23{\cdot}5\%$$

Company seems to have very sound financial policy because after earning at the rate of 23·5%, they are paying only 8% on fixed loans.

(c) *Return on shareholders' funds* :

$$\text{Return on shareholders' funds} = \frac{\text{Income after taxation}}{\text{Shareholders' funds}} \times 100$$

$$= \frac{\text{Rs. } 6{,}000 + \text{Rs. } 2{,}000}{\text{Rs. } (20{,}000 + 4{,}000 + 2{,}000 + 6{,}000)} \times 100$$

$$= \frac{\text{Rs. } 8{,}000}{\text{Rs. } 32{,}000} \times 100 = 25\%$$

Provision for taxation for future has been included in income. Since transfer to capital reserve is not available to shareholders it has been excluded from the income.

Illustration 18. Define any three of the following accounting ratios :

(*i*) Liquid ratio ; (*ii*) Proprietary ratio ; (*iii*) Operating ratio.

(*iv*) Net profit ratio ; (*v*) Return on proprietor's funds.

From the following financial statements of Rimzim Ltd, calculate any three of the above accounting ratios and comment on the significance thereof.

Rimzim Ltd

MANUFACTURING, TRADING, AND PROFIT AND LOSS ACCOUNT

for the year ended 31st March 1980

	Rs.			Rs
To Opening stock	5,00,000	By Sales : Cash	3,00,000	
To Purchases	11,00,000	Credit	17,00,000	
To Wages	3,00,000			20,00,00
To Factory overheads	2,00,000	By Closing stock		6,00,00
To Gross profit	5,00,000			
Rs.	26,00,000		Rs.	26,00,00
To Administrative expenses	75,000	By Gross profit		5,00,00
To Selling and distribution expenses	50,000	By Dividend on investments		10,00
To Debenture interest	20,000	By Profit on sale of furniture		20,00
To Depreciation	60,000			
To Loss on sale of motor car	5,000			
To Net profit	3,20,000			
Rs.	5,30,000		Rs.	5,30,00
To Preference dividend (net)—interim	15,000	By Balance b/d		2,71,00
To Provision for taxation	1,76,000	By Net profit		3,20,00
To Balance c/d	4,00,000			
Rs.	5,91,000		Rs.	5,91,00

BALANCE SHEET
As at 31st March 1980

Liabilities	Rs	*Assets*	Rs
Equity share capital	10,00,000	Goodwill (at cost)	5,00,000
6% Preference share capital	5,00,000	Plant & machinery	6,00,000
General reserve	1,00,000	Land and building	7,00,000
Profit and loss account	4,00,000	Furniture and fixtures	1,00,000
Provision for taxation	1,76,000	Stock-in-trade	6,00,000
Bills payable	1,24,000	Bills receivable	30,000
Bank overdraft	1,20,000	Debtors	1,50,000
Creditors	4,80,000	Bank	2,20,000
Rs.	29,00,000		Rs. 29,00,000

Solution : (*i*) *Liquid ratio* : This is also known as 'acid test ratio' or 'quick ratio'. It is a ratio between cash and bank balances, readily saleable securities and book debts against current liabilities and is calculated as under :

$$\frac{\text{Quick assets}}{\text{Current liabilities}}$$

$$=\frac{\text{Bills receivable}+\text{Debtors}+\text{Bank}}{\text{Tax provision}+\text{Bills payable}+\text{Creditors}+\text{Bank overdraft}}$$

$$=\frac{\text{Rs } 30,000+1,50,000+2,20,000}{\text{Rs. } 1,76,000+1,24,000+4,80,000+1,20,000}=\frac{4,00,000}{9,00,000}=0{\cdot}44$$

Thus against the currently payable liability of Re. 1, the readily available liquid assets for payment is Re. 0·44.

(*ii*) *Proprietary ratio.* It is the ratio of total shareholders' fund to the total assets employed in the business. In the given problem, it is

$$\frac{\text{Equity capital}+\text{Pref capital}+\text{General reserve}+\text{Profit and loss A/c}}{\text{Total assets}}$$

$$=\frac{\text{Rs. } 10,00,000+5,00,000+1,00,000+4,00,000}{\text{Rs. } 29,00,000}=\frac{20,00,000}{29,00,000}=0{\cdot}69$$

Thus, out of every Re. 1 employed in the business, shareholders' contribution is Re. 0·69 whereas the creditors have contributed the remaining Re. 0·31.

(*iii*) *Operating ratio.* Operating ratio is the ratio between cost of sales to the total net sales and is found as under :

$$=\frac{\text{Cost of goods sold}+\text{Other operating expenses}-\text{closing stock}}{\text{Total net sales}}\times 100$$

$$=\frac{\text{Opening stock}+\text{Purchases}+\text{Wages}+\text{Overheads}}{\text{Total net sales}}\times 100$$

$$=\frac{\text{Rs. } 5,00,000+11,00,000+3,00,000+2,00,000-6,00,000 +75,000+50,000+60,000}{20,00,000}\times 100$$

$$=\frac{16,85,000}{20,00,000}\times 100=84{\cdot}25\%$$

This ratio indicates the ratio of total expenses to sales and deducting it from 100, we get profit margin on sales. However, in calculating this ratio non-operating income and expenses (like profit or loss on sale of assets and dividends and purely financial expenses like interest) are excluded.

(*iv*) *Net profit ratio.* It is the ratio between net profit (excluding non-operating income and expenses) to total sales.

$$= \frac{\text{Net profit} + \text{Loss on sale of motor car} + \text{Debenture interest} - (\text{Dividend} + \text{Profit on sale of furniture})}{\text{Total sales}} \times 100$$

$$= \frac{\text{Rs. } 3{,}20{,}000 + 5{,}000 + 20{,}000 - (10{,}000 + 20{,}000)}{20{,}00{,}000} = \frac{3{,}15{,}000}{20{,}00{,}000} \times 100$$

$= 15{\cdot}75$. Thus, on a sale of Rs. 100 a net profit of Rs. 15·75 is made before taxes*.

(*v*) *Return on proprietor's fund.* It is a ratio between net operating profit to total shareholders' equity. In the given problem, it is

$$\frac{\text{Net operating profit [as per } (iv) \text{ above]}}{\text{Shareholders equity [as per } (ii) \text{ above]}} \times 100$$

$$= \frac{2{,}95{,}000}{20{,}00{,}000} \times 100 = 14{\cdot}75\%$$

Illustration 19. Below are given the final accounts of Eclipse Limited.

TRADING AND PROFIT AND LOSS ACCOUNT
for the year ended 31st December 1979

		Rs.			Rs.
Opening stock		1,30,000	Sales—Cash		1,00,000
Purchases		4,20,000	Credit		3,00,000
		5,50,000			
Less : Closing stock		2,10,000			
Cost of sales		3,40,000			
Gross profit		60,000			
	Rs.	4,00,000		Rs.	4,00,000
Depreciation		12,000	Gross profit		60,000
General expenses		21,000			
Directors' emoluments		11,000			
Net profit c/d		16,000			
		Rs. 60,000			Rs. 60,000

* Operating ratio together with net profit ratio when expressed as percentage will equal 100.

BALANCE SHEET

As at 31st December 1979

	Rs		Rs.
Issued share capital	3,00,000	Fixed assets	2,12,000
Profit and loss account	90,000	Stock	2,10,000
Creditors	1,40,000	Debtors	,60,000
Bank overdraft	52,000		
	Rs. 5,82,000		Rs 5,82,000

Prepare the budgeted trading and profit and loss account and balance sheet [illegible] objectives decided by the Board [illegible].

1. The rate of gross profit to sales is to be increased by $33\frac{1}{3}\%$.
2. Stock is to be reduced by Rs. 20,000 by the end of 1980.
3. The ratio of cash to credit sales is to be lowered from 1 : 3 to 1 : 4.
4. The rate of stock turnover is to be doubled.
5. Depreciation is to be increased to Rs. 22,000.
6. The ratio of debtors to credit sales and the ratio of creditors to closing stock should be 1 : 2.

(A) BUDGETED TRADING AND PROFIT AND LOSS ACCOUNT

for the year ending 31-12-1980

	Rs.			Rs.
Opening stock	2,10,000	Sales :		
Purchases	7,80,000	Cash	2,00,000	
		Credit	8,00,000	
	9,90,000			10,00,000
Less : Closing stock	1,90,000			
Cost of sales	8,00,000			
Gross profit c/d	2,00,000			
	Rs. 10,00,000			Rs. 10,00,000
Depreciation	22,000	Gross profit b/d		2,00,000
Directors' emoluments	11,000			
General expenses	21,000			
Net profit c/d	1,46,000			
	Rs. 2,00,000			Rs. 2,00,000

BUDGETED BALANCE SHEET

as on 31-12-1980

Liabilities	Rs.	*Assets*	Rs
Issued		Fixed assets	1,90,000
Share capital :	3,00,000	Stock	1,90,000
Profit and loss account	2,36,000	Debtors	4,00,000
Creditors	95,000		
Bank overdraft	1,49,000		
	Rs. 7,80,000		Rs. 7,80,000

Workings ;

1. *Cost of sales and purchases :*

$$\text{Present stock turnover} = \frac{\text{Cost of sales}}{\text{Average stock}}$$

$$= \frac{\text{Rs. } 3{,}40{,}000}{\frac{\text{Rs. } 1{,}30{,}000 + \text{Rs. } 2{,}10{,}000}{2}} = 2$$

Stock turnover for the budget period $= 2 \times 2 = 4$.

Closing stock for the budget period = Rs. 2,10,000 − Rs. 20,000
= Rs. 1,90,000.

$$\text{Average stock for the budget period} = \frac{\text{Rs. } 2{,}10{,}000 + \text{Rs. } 1{,}90{,}000}{2}$$

= Rs. 2,00,000.

∴ Cost of sales = Average stock × Stock turnover
= Rs. 2,00,000 × 4
= Rs, 8,00,000.

Purchases = Cost of sales + Closing stock − Opening stock
= Rs. 8,00,000 + Rs. 1,90,000 − Rs. 2,10,000
= Rs. 7,80,000.

2. *Sales :*

$$\text{Present G. P Rate} = \frac{\text{Rs. } 60{,}000}{\text{Rs. } 4{,}00{,}000} \times 100 = 15\%$$

Budgeted G. P. Rate = $15\% + 33\frac{1}{3}\%$ of 15%
= 20% (*i.e.*, 25% on cost of sales)

Sales = Cost of sales + G. P.
= Rs. 8,00,000 + 25% of Rs. 8,00,000
= Rs. 10,00,000.

3. *Debtors :*

Ratio of debtors to credit sales 1 : 2.
Credit sales being Rs. 8,00,000, debtors will be Rs. 4,00,000.

4. *Creditors :*

Ratio of creditors to stock is 1 : 2.
Stock being Rs. 1,90,000 creditors will be Rs. 95,000.

5. *Fixed assets :*

	Rs.
Fixed assets as per last balance sheet	2,12,000
Less ; Depreciation provided	22,000
Shown in the budgeted balance sheet	Rs. 1,90,000

6. *Profit and loss account* :

Balance as per last balance sheet	Rc.	90,000
Add : Surplus as per budgeted profit and loss account		1,46,000
Shown in the budgeted balance sheet	Rs.	2,36,000

7. *Bank overdraft* :

Can be ascertained as a balancing figure of the budgeted balance eet. It can also be ascertained as follows :

BANK ACCOUNT

	Rs.		Rs.
o Cash Sales	2,00,000	By Balance b/d	52,000
o Collections from debtors	5,60,000	By Payments to creditors	8,25,000
o Balance c/d	1,49,000	By Payment of expenses	32,000
	Rs. 9,09,000		Rs. 9,09,000
		By Balance b/d	1,49,000

Collections from debtors and payments to creditors can be ascertained y preparing total debtors and total creditors accounts.

lustration 20. Following is the balance sheet of *H* Ltd. as at 31st ecember, 1973 :

Liabilities			Rs.	*Assets*	Rs.
hare capital			1,00,000	Current assets	3,35,400
ixed liabilities :				Fixed assets	21,200
% Development loan			50,000		
0% Mortgage loan			8,000		
urrent liabilities			1,78,860		
apital surplus			8,440		
arned surplus					
alance from the last year		5,870			
et profit before tax	11,240				
ess : Provision for tax	2,810				
	8,430				
ess : Dividend for 1972	3,000	5,430	11,300		
			Rs 3,56,600		Rs. 3,56,600

(*a*) Explain what do you understand by return on total investment. hat is its purpose ? From the above balance sheet calculate return on otal investment. Also comment on the policy of finance.

(*b*) What do you understand by return on shareholders' funds ? ow does it differ from the return on total investment ? Calculate return n shareholder fund.

Solution : 1. Total investment in the firm is equal to shareholders' funds (including retained earning) plus fixed liabilities. Remember that current liabilities are not investments.* Return on *total* investment is the most useful over-all measure of profitability. This gives a measure of the management's skill in using the funds invested in the company.

The formula is :

$$\frac{\text{Net profit before tax} + \text{Interest on fixed liabilities}}{\text{Shareholders funds} + \text{Fixed liabilities}}$$

Therefore, return on total investment is :

$$= \frac{\text{Rs. } 11{,}240 + \text{Rs. } (3{,}000 + \text{Rs. } 560)}{\text{Rs. } (1{,}00{,}000 + 8{,}440 + 11{,}300) + \text{Rs. } (50{,}000 + 8{,}000)}$$

$$= \frac{\text{Rs. } 14{,}800}{\text{Rs. } 1{,}19{,}740 + \text{Rs. } 58{,}000} = \frac{\text{Rs. } 14{,}800}{\text{Rs. } 1{,}77{,}740} = 8{\cdot}3\%$$

Company's policy of finance is prudent because earning power of the company is 8·3% while fixed liabilities are taken at 6% and 7% which is less than the earning rate.

2. Return on shareholders' fund is the relation between the net profit available for the shareholder and the total shareholders' funds. Since profit available to the shareholders is only profit *after tax*, for this purpose profit *after* tax is taken as against profit *before* tax in the case of return on total investment.

In the above case return on shareholders funds is :

$$\frac{\text{Profits after tax}}{\text{Shareholders funds (after including accumulated profits)}}$$

$$= \frac{\text{Rs. } 8{,}430}{\text{Rs. } 1{,}00{,}000 + \text{Rs. } 8{,}440 + \text{Rs. } 11{,}300}$$

$$= \frac{\text{Rs. } 8{,}430}{\text{Rs. } 1{,}19{,}740} \times 100 = 7{\cdot}04\%$$

Illustration 21. Following items appear in the accounts at 31st December, 1966 of Operations Ltd :

Cash	Rs. 48,600	Ordinary stock, Rs. 10 units	Rs. 10,00,000
Land and buildings at cost	8,00,000	Profit and loss account balance	2,17,000
Deposits and payments in advance	62,000	Proposed ordinary stock dividend for 1956.	86,250
Stock	2,72,800	Trade investments	20,000
Trade creditors	4,05,750	Advance payment of tax	1,00,000
General reserve	1,00,000	Provision for taxation	2,64,000
Debtors	5,23,000	Bills payable	18,000
Bills receivable	22,600	Net sales for the year 1965	21,82,400
Plant and machinery, at cost, less depreciation	5,44,000	Net profit for the year 1966 before taxation and dividends	3,27,830
Debentures—repayable 1930 (secured)	2,50,000		
Bank overdraft	52,000		

* *How to Read a Balance Sheet* :

Note : The values of all fixed assets reflect current price levels and adequate depreciation has been provided.

You are required to arrange the above items in the form of a financial statement to show the following accounting ratios, which should be stated : (a) return on capital employed ; (b) stock : fixed assets ; (c) current assets : current liabilities ; (d) Sales : debtors and bills receivable.

(Adapted from C.A. Final, 1967)

Solution :

Operations Ltd.

STATEMENT OF FUNDS EMPLOYED

As on 31st Dec. 1966

Working capital :		
Current assets :		
Cash	Rs. 48,600	
Deposits and payments in advance	62,000	
Stock	2,72,800	
Debtors	5,23,000	
Bills receivable	22,600	
Advance payment of tax	1,00,000	Rs. 10,29,000
Current liabilities :		
Trade creditors	4,05,750	
Bills payable	18,000	
Provision for taxation	2,64,000	
Bank overdrafts	52,000	
Proposed dividend	86,250	8,26,000
Working capital		2,03,000
Fixed assets :		
Land and buildings at cost	Rs. 8,00,000	
Plant and machinery at cost less depreciation	5,44,000	
Trade investments	20,000	Rs. 13,64,000
Total funds employed		15,67,000
Less : Debentures (secured)		2,50,000
Shareholders' equity		Rs. 13,17,000
Represented by :		
Fully paid shares of Rs. 10 each		Rs 10,00,000
General reserves		1,00,000
Profit and loss account balance		2,17,000
		Rs. 13,17,000

Operating Results :

Sales during 1966	Rs. 21,82,400
Net Profit before appropriations for taxation and dividends	3,27,830

Ratios

(*a*) Return on Capital employed $= \frac{3,27,830}{13,17,000} \times 100 = 24{\cdot}9\%$

Normally the amount of capital employed should include debentures also. Since profits have been given after charging debenture interest, debenture amount has been excluded. Further, since the rate of interest on debentures has not been given, the adjustment in this respect is not possible. Again many would like to calculate the rate of return on the basis of net profit after providing for taxes. If it is done and the rate of tax is assumed to be 50%, then the profit after tax will be Rs. 1,63,915, and the rate of return will be 12·45%.

(*b*) Stock : Fixed Assets = 2,72,800 : 13,44,000 = 1 : 4·93.

(c) Current Assets : Current Liabilities = 10,29,000 : 8,26,000
= 1·25 : 1

(*d*) Sales : Debtors and Bills Receivable = 21,82,400 : 5,45,600
= 4 : 1

Illustration 22 Shamsher Sterling Ltd. has been operating for two years. The most important facts as appearing from its accounts are as under :

BALANCE SHEETS (YEAR END)

	I Year	*II Year*		*I Year*	*II Year*
Equity shares of Rs. 10 each	Rs. 1,00,000	1,00,000	Goodwill	Rs. 60,000	60,000
Reserves	20,000	30,000	Fixed assets (at cost)	1,40,000	1,60,000
Profit & loss balance	30,000	20,000	Stocks	30,000	60,000
Secured loan	80,000	80,000	Sundry debtors	30,000	60,000
Bank overdraft		20,000	Advances	10,000	
Sundry creditors	50,000	70,000	Cash balances	30,000	
Provision for taxation	20,000	20,000			
	Rs. 3,00,000	3,40,000		Rs. 3,00,000	3,40,000

PROFIT AND LOSS ACCOUNT

Transfer to reserve	Rs. 20,000	10,000	Balance b/d	Rs. —	30,000
Managing agents' commission	10,000	30,000	Profit for the year after taxation and before depreciation	70,000	50,000
Dividends	10,000	20,000			
Balance c/d	30,000	20,000			
	Rs. 70,000	80,000		Rs. 70,000	80,000

You find that the total sales amounted to Rs. 6,00,000 in the first year and Rs 5,00,000 in the second year. Examine the above details and give a step-by-step analysis in a manner which indicates the overall efficiency of the business and its financial position.

(C.A. Final, 1968)

Solution :

Shamsher Sterling Ltd

An analysis of the working and financial position

I. *Overall efficiency.* The following ratios can be used for assessing the overall efficiency of the company :

		Year 1	*Year 2*
(*i*)	Net margin on sales (profit* as given less managing agents commission	10 00%	4·00%
(*ii*)	Sales/Capital Employed (Capital employed = Tangible assets minus current liabilities	3·53 times	2·94 time
(*iii*)	Return on capital employed (Capital employed defined as above)	35·29%	11·76%
	Analysis of (*ii*)		
(*a*)	Sales/Fixed assets (year end)	4·29 times	3 13 times
(*b*)	Sales/Stocks (year end)	20 00 times	8·33 times
(*c*)	Debt collection period	18 days	44 days

From the above analysis it is very clear that in year 2, the company's overall efficiency was much lower than in year 1. The following facts support the conclusion :

[illegible] be due to lower selling prices or higher purchase prices or due to inefficiency. The inefficiency in general seems to be the probable reason inasmuch as sales price generally covers the cost price of the goods made.

(*ii*) There is an all-round decline in the use of resources as is evidenced by ratio (*ii*) and its analysis. Even if it is assumed that the increase in fixed assets came towards the year end, there can be little justification for the very sharp fall in the ratio of sales to inventory and in the sharp rise in number of days of sale outstanding. These two ratios are very disturbing and immediately raise the question as to the reliability of [illegible] of the reasons for the [illegible] ales fell by 16⅔%. can [illegible] nd that sundry debtors [illegible] year 2 would be com- [illegible] o investigate the position and determine the truth

*At the very outset it has to be noted that the figure of profit "after taxation and before depreciation" is not the true profit. Further, profit before interest is more appropriate for the purpose of measuring efficiency. However, assuming the depreciation which should have been provided and the interest not being materially different in the two years, the ratios may not be taken to reflect movement in efficiency of performance.

(*iii*) A very disturbing feature is that sales have fallen heavily. Due to this the company must be now operating extremely close to the break-even point (because the profit disclosed is before depreciation). There is danger ahead unless salse are increased. In addition, the company must see to it that proper control is exercised over costs. The increase in sales must be brought about by a better use of present facilities and resources.

II. *Financial position.* The following ratios can be used for assessing the financial position of the company :

	Year 1	Year 2
(*i*) Debt-Equity Ratio (Debt/Equity + Debt)	34·8%	34·8%
(*ii*) Fixed Assets (including Goodwill) long-term funds	0·87 times	0·95 times
(*iii*) Current Ratio (Current Assets/Current liabilities)	1·43 ,,	1·09 ,,
(*iv*) Stocks/Working Capital	1·00 ,,	6·00 ,,
(*v*) Sundry Debtors/Working Capital	1·00 ,,	6·00 ,,

The Company's immediate financial position is very bad. This is indicated by the (*i*) decline in the current ratio, (*ii*) absence of cash balance, (*iii*) presence of bank overdraft. Company will find it difficult if asked to pay it back. The company will not be able to meet its immediate liabilities and carry on its work if a portion of stocks become unsaleable and if a few customers refuse to pay on time. This brings into bold relief the bad policy pursued by the company relating to the following :

(*i*) increasing the commission to managing agents ;

(*ii*) buying fixed assets in a period of declining sales ; and

(*iii*) paying a dividend and that too at double the figure of the previous year. (The fact that the dividend has been paid before providing for depreciation in contravention of Sec. 205 of the Companies Act is another matter.)

A point which stands out is that fixed assets are at cost without there being any provision for depreciation. There are no provisions for the replacement of assets and for the repayment of loan. Besides it should be remembered that, in view of the extremely low profits, the goodwill is probably valueless.

The company is still young but it should take immediate remedial measures with respect to the following : (*i*) better sales performance ; (*ii*) cost control ; (*iii*) ascertainment of profits according to proper accounting principles ; (*iv*) control over inventory and collection of debts ; and (*v*) no payment of dividends until company's cash needs are properly covered.

Illustration 23. The information given below was taken from the financial statements of Shanti Corporation. During 1978, the Corporation has made the purchases from a new supplier.

	1978	1977
Gross Profit on sales	Rs. 2,40,000	Rs. 1,50,000
Net Income as a % of sales	5%	10%
Net Income	40,000	60,000

You are required to prepare a condensed comparative income statement showing as many details as possible and point out the favourable and unfavourable trends.

Solution :

Details	*1978* Rs.	*% of sales*	*1977* Rs.	*% of sales*
Net sales	8,00,000	100%	6,00,000	100%
Less : Cost of goods sold	5,60,000	70%	4,50,000	75%
Gross Profit	2,40,000	30%	1,50,000	25%
Less : Operating expenses	2,00,000	25%	90,000	15%
Net Operating Profit	40,000	5%	60,000	10%

Comments :

The Gross profit margin has increased from 25% to 30% which is a favourable trend. In spite of this favourable trend the net profit as a percentage of sales has dropped from 10 to 5% as a result of increase in the operating expenses from the previous level of 15% of sales to 25% which is an unfavourable trend.

Illustration 24. During the year 1974 Jailal Amritlal & Sons made a gross profit of 25% on turnover of Rs. 21,600 and a net profit of 12% on turnover. This rate of turnover of stock for the year was 10.

For the following year they estimate that they can increase their rate of turnover to 14 while carrying the same average stock, by reducing their prices by 5% on selling price. If they do so their ratio of expenses to turnover will be reduced by 2%. Advise the firm.

Solution :

Sales (given)

Gross profit at 25% on sale, $\frac{25}{100} \times$ Rs. 21,600

Net profit at 12% on sale, $\frac{12}{100} \times$ Rs. 21,600

Cost of goods sold (*i.e.*, sales—gross profit)

Expenses, (gross profit—net profit)

Ratio of expense to sales, $\frac{2,808}{21,600} \times 100$

New ratio of expense to sales, being 2% less

Average stock held :

$$\text{Stock turnover} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

$$\text{Average stock} = \frac{\text{Cost of goods sold}}{\text{Stock turnover}} = \frac{\text{Sales} - \text{Gross profit}}{\text{Stock turnover}}$$

$$= \frac{21{,}600 - 5{,}400}{10} = \frac{16{,}200}{10} = \text{Rs. } 1{,}620$$

New cost of goods sold, being 14 times of average stock, is 1,620 × 14 = 22,680

New sales price :

	Rs.
Old sales	21,200
Old sales at new ratio being 5% less	$\frac{95}{100} \times 21{,}600 = 20{,}520$

New sales, therefore, are—

∵ When (old) cost of goods sold is Rs. 16,200 sales at new rates are Rs. 20,520

∴ When (new) cost of goods are Rs. 22,680 sales at new price are $\frac{20{,}520}{16{,}200} \times \text{Rs. } 22{,}680 = \text{Rs. } 28{,}728$

New gross profit, (New sales—New cost of goods sold)	6,048
New rate of gross profit, $\frac{6{,}048}{28{,}728} \times 100$	21%
New expenses are $\frac{11}{100} \times \text{Rs. } 28{,}728$	3,160
New net profit (new gross profit Rs. 6,048—new expenses Rs. 3,160)	2,888
New rate of profit on sales, $\frac{2{,}888}{28{,}728} \times 100$	10·05%

Summary of rates of profits

	Old	*New*
Gross profit	25	21
Net profit	12	10·05

Since rates of gross profit and net profit will fall by pursuing the new policy it is advised not to adopt it.

Illustration 25.

Gross profit	Rs. 80,000
Gross profit to cost of goods sold ratio	1/3
Stock velocity	6 times
Opening stock	Rs. 36,000

Accounts receivable velocity (year of 360 days)	72 days
Accounts payable velocity	90 days
Current assets	Rs. 1,50,000
Bills receivable	20,000
Bills payable	5,000
Fixed assets turnover ratio	8 times

Prepare balance sheet with as many details as possible.

Solution :

(A) *TUTORIAL NOTES*

(1) *Cost of goods sold* = Gross profit × 3 times
= 80,000 × 3 = Rs. 2,40,000

(2) *Sales* = Cost of goods sold + Gross profit
= Rs. 2,40,000 + Rs. 80,000 = Rs. 3,20,000

(3) *Average stock* :

$$\text{Stock velocity} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

$$\text{Average stock} = \frac{\text{Cost of goods sold}}{\text{Stock velocity}} = \frac{2,40,000}{6} = \text{Rs } 40,000$$

(4) *Closing Stock* :

$$\frac{\text{Opening stock} + \text{Closing stock}}{2} = \text{Average stock}$$

or Closing stock = Average stock × 2 − Opening stock
. = 40,000×2−Rs. 36,000 = Rs. 80,000−Rs. 36,000 = Rs. 44,000

(5) *Accounts receivable* :

$$\text{Accounts receivable turnover} = \frac{\text{Credit sales}}{\text{Average debtors}}$$

$$\text{Collection period} = \frac{360}{\text{Accounts receivable turnover}}$$

$$= \frac{360 \times \text{Average debtors}}{\text{Credit sales}}$$

or
$$\text{Average debtors} = \frac{\text{Collection period} \times \text{credit sales}}{360}$$

$$= \frac{72 \times 3,20,000}{360} = \text{Rs. } 64,000$$

Note : All sales have been assumed to be credit sales

(6) *Debtors* = Accounts receivable − Bills receivable
= Rs. 64,000 − Rs. 20,000 = Rs. 44,000

(7) *Accounts payable* :

$$\text{Accounts payable turnover} = \frac{\text{Credit purchases}}{\text{Average creditors}}$$

$$\text{Payment period} = \frac{360}{\text{Account payable turnover}}$$

or
$$\text{Payment period} = \frac{360}{\dfrac{\text{Credit purchases}}{\text{Average creditors}}}$$

$$= \frac{360 \times \text{Average creditor}}{\text{Credit purchases}}$$

$$\text{Average creditors} = \frac{\text{Payment period} \times \text{Credit purchases}}{360}$$

$$= \frac{90 \times \text{Rs. } 2{,}48{,}000^{*}}{360} = \text{Rs. } 62{,}000$$

(8) *Creditors* = Accounts payable − Bills payable
= Rs. 62,000 − Rs. 5,000 = Rs. 57,000

(9) *Fixed assets*

$$\text{Fixed assets turnover} = \frac{\text{Cost of goods sold}}{\text{Fixed assets}}$$

$$\text{or} \quad \text{Fixed assets} = \frac{\text{Cost of goods sold}}{\text{Fixed assets turnover}} = \frac{2{,}40{,}000}{8}$$

$$= \text{Rs. } 30{,}000$$

Note : For the calculation of fixed assets turnover ratio it is cost of goods sold (not sales) which is taken into consideration.

(B) BALANCE SHEET as on ...

Shareholders' fund (balancing figure)	Rs. 1,18,000	Fixed assets	Rs. 30,000
Creditors	57,000	Current assets :	
Bills payable	5,000	Stock	44,000
		Debtors	44,000
		Bills receivable	20,000
		Cash	42,000
	Rs. 1,80,000		Rs. 1,80,000

Note : In the absence of information average debtors and average creditors have been taken as debtors and creditors at the end respectively.

Illustration 26. From the following information make out a statement of proprietor's funds with as many details as possible :

(*i*) Current ratio 2·5 ; (*ii*) Liquid ratio 1·5 ; (*iii*) Proprietary ratio (fixed assets/proprietary fund) 0·75 ; (*iv*) working capital Rs. 60,000 ; (*v*) Reserve and surplus Rs. 40,000 ; (*vi*) Bank overdraft Rs. 10,000 ; and (*vii*) There is no long-term loan or fictitious asset. **(C.A. Final, 1968)**

Solution :

(A) *TUTORIAL NOTES*

(*i*) *Current liabilities*

Current assets − Current liabilities = Working capital

$$\text{or} \quad 2{\cdot}5 - 1 = \text{Rs. } 60{,}000$$

$$\text{or} \quad 1{\cdot}5 = \text{Rs. } 60{,}000$$

$$\text{A} \quad 1 = \frac{\text{Rs. } 60{,}000}{1{\cdot}5} = \text{Rs. } 40{,}000$$

Bank overdraft is included in current liabilities.

* Opening Stock + purchases − Stock at the end = Cost of goods sold

or Purchases = Cost of goods sold + Closing stock − Opening stock
= Rs. 240,000 + Rs. 44,000 − Rs. 36,000 = Rs. 2,43,000

Note : All purchases are assumed to be credit purchases.

(*ii*) *Current assets*

Current assets = Working capital + Current liabilities
= Rs. 60,000 + 40,000 = Rs. 1,00,000

(*iii*) *Quick assets.* These are 1·5 times the current liabilities (see liquid ratio). Thus quick assets are Rs. 60,000 (*i.e.*, Rs. 40,000 × 1·5).

(*iv*) *Stock in trade*

= Current assets − Quick assets
= Rs. 1,00,000 − Rs. 60,000 = Rs. 40,000

(*v*) *Proprietor's fund* Since there are no long-term liabilities, the following relationship can be established :

Proprietor's fund + Current liabilities = Fixed assets + Current assets

or Proprietor's fund − Fixed assets = Current assets − Current liabilities

or $1 - 0{\cdot}75 = \text{Rs } 1{,}00{,}000 - \text{Rs. } 40{,}000$

$0{\cdot}25 = \text{Rs } 60{,}000$

$\therefore \quad 1 = \dfrac{60{,}000}{0{\cdot}25} = \text{Rs. } 2{,}40{,}000$

(*vi*) *Fixed assets.* These are 0·75 times the proprietor's fund, thus fixed assets are Rs. 1,80,000, (*i e.*, Rs 2,40,000 × 0·75)

(*vii*) *Share capital*

= Proprietors' fund − Reserves
= Rs. 2,40,000 − Rs. 40,000 = Rs. 2,00,000.

(B) STATEMENT OF PROPRIETOR'S FUND

Proprietor's fund :				
Share capital			2,00,000	
Reserves and surplus			40,000	Rs 2,40,000
Investment of funds :				
Fixed assets			1,80,000	
Working capital :				
Stock-in-trade		40,000		
Liquid assets		60,000		
Total current assets		1,00,000		
Less : Current liabilities ;				
Bank overdraft	10,000			
Other liabilities	30,000	40,000	60,000	2,40,000

Illustration 27. The following data relates to the financial statements of Everbright Mica Limited for the year ended December 31, 1974

...t ratio	3 : 1	Number of shares of Rs. 10 each	25,00...
...est ratio	1·50 : 1	E.P.S.	Rs. 2
...assets	Rs. 30,000	Gross profit to sales	20%
...tory turnover	10 times	Creditors velocity	22·22 days
...d assets : Shareholders ...uity	0·875 : 1	Debt collection period	12 days
...al operating expense to sales	90%	Earning for the year as percentage of share capital	25%

Closing stock is less by Rs. 6,000 than opening stock. There are no ...epaid expenses, long-term liabilities, and intangible assets.

Prepare company's profit and loss account for the year ended Decem-...er 31, 1974 and balance sheet as on that date. Assume year to be of ...360 days.

Solution :

PROFIT AND LOSS ACCOUNT

For the year ended December 31, 1974

	Rs.		Rs.
To Stock	36,000	By Sales	4,12,50...
To Purchases	3,24,000	By Closing stock	30,0...
To Gross profit	82,500		
	Rs. 4,42,500		Rs. 4,42,500
To Operating expenses (indirect)	41,250	By Gross profit	82,500
To Net Profit	50,000	By Non-operating incomes	8,750
	Rs. 91,250		Rs. 91,250

BALANCE SHEET

As on December 31, 1974

Liabilities		*Assets*	
Capital : Subscribed capital : 25,000 shares of Rs. 10 each, Rs. 8 paid up	Rs. 2,00,000	Fixed assets	Rs. 2,80,000
Profit and loss account	50,000	Stock-in-trade	30,000
Reserves	70,000	Debtors	13,75...
Creditors	20,000	Bank	16,25...
	Rs. 3,40,000		Rs. 3,40,0...

Tutorial Notes

(1) *Quick assets* (given) Rs. 3...

(2) *Current liabilities* Rs. 2...

Acid test ratio is 1·50 : 1. It means quick assets are $\frac{3}{2}$ tim... current liabilities. In other words, current liabilities are $\frac{2}{3}$ times the... assets. Thus current liabilities are Rs. 20,000 (*i.e.*, $\frac{2}{3}\times$Rs. 30,000).

(3) *Current assets.* These are three times the current liabili... current ratio). Thus current assets are Rs. 60,000 (*i.e.*, Rs. 20,00...

(4) *Stock-in-trade at the end* $=$ Current assets $-$ Quick assets
$=60{,}000-30{,}000=$ Rs. 30,000

(5) *Opening stock* $=$ Closing stock $+$ Rs. 6,000
$=$ Rs. $30{,}000+$ Rs. $6{,}000=$ Rs. 36,00...

(6) *Average stock* $= \dfrac{\text{Rs. } 36,000 + \text{Rs. } 30,000}{2} = \text{Rs. } 33,000$

(7) *Cost of goods sold* :

$$\text{Stock turnover} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

or Stock turnover $\times$ Average stock

$= $ Cost of goods sold

or $10 \times \text{Rs. } 33,000 = \text{Rs. } 3,30,000$

(8) *Sales* $=$ Cost of goods sold $+$ Gross profit

$= \text{Rs. } 3,30,000 + \left(\frac{20}{80} \times \text{Rs. } 3,30,000\right)$

$= \text{Rs. } 3,30,000 - \text{Rs. } 82,500 = \text{Rs. } 4,12,500.$

(9) *Purchases* $=$ Cost of goods sold $+$ Closing stock $-$ Opening stock

$= 3,30,000 + 30,000 - 36,000 = \text{Rs. } 3,24,000$

(10) *Total operating expenses*

$= $ Rs. 3,71,250 (*i.e.*, 90% of Rs 4,12,500)

(11) *Indirect operating expenses*

$=$ Total operating expenses $-$ Cost of goods sold

$= \text{Rs. } 3,71,250 - \text{Rs. } 3,30,000 = \text{Rs } 41,250.$

(12) *Net operating profit*

$=$ Gross profit Indirect expenses

$= $ Rs. 82,500 Rs. 41,250 Rs. 41,250.

(13) *Total net profit* $=$ EPS $\times$ No of shares

$= 2 \times 25,000 = \text{Rs. } 50,000.$

(14) *Non-operating income*

$=$ Total net profit $-$ Net operating profit

$= \text{Rs. } 50,000 - \text{Rs. } 41,250 = \text{Rs. } 8,750.$

(15) *Debtors* :

$\dfrac{\text{Debtors}}{\text{Net sales}} \times 360 =$ Collection period

$$\textit{Debtors} = \frac{\text{Collection period} \times \text{Net sales}}{360} = \frac{12}{360} \times 4,12,500$$

$= \text{Rs. } 13,750.$

(16) *Cash and bank balance*

$=$ Current assets $-$ Debtors $-$ Stock-in-trade

$= \text{Rs. } 60,000 - \text{Rs. } 13,750 - \text{Rs. } 30,000$

$= \text{Rs. } 16,250.$

(17) *Creditors* $= \dfrac{\text{Credit purchases} \times \text{Creditors velocity}}{360}$

$= \dfrac{3,24,000 \times 22{\cdot}22}{360} = \text{Rs. } 20,000.$

(18) *Paid-up capital* $= \dfrac{100}{\text{Rate of earning}} \times \text{Total net earning}$

$= \dfrac{100}{25} \times \text{Rs. } 50{,}000 = \text{Rs. } 2{,}00{,}000$

Thus, there are 25,000 shares of Rs. 10 each, Rs. 8 paid up.

(19) *Shareholders equity.* Since there are no long-term liabilities, the following equation must be satisfied :

Shareholders equity + Current liabilities
= Fixed assets + Current assets

or Shareholders equity − Fixed assets
= Current assets − Current liabilities

$1 - 0{\cdot}875 = \text{Rs. } 60{,}000 - \text{Rs. } 20{,}000$

$1 - 0{\cdot}875 = \text{Rs. } 40{,}000$

or $0{\cdot}125 = \text{Rs. } 40{,}000$

$\therefore \quad 1 = \dfrac{40{,}000}{0{\cdot}125} = \text{Rs. } 3{,}20{,}000$

(20) *Reserves* = Shareholders equity − Profits − Paid-up share capital
= Rs. 3,20,000 − Rs. 50,000 − Rs. 2,00,000
= Rs. 70,000

(21) *Fixed assets.* These are 0·875 of shareholders equity. Thus, fixed assets are Rs. 2,80,000 (*i.e.*, 0·875 × Rs. 3,20,000).

Illustration 28. From the following particulars, prepare the balance sheet X Ltd., which has only one class of share capital :

(*i*) Sales for the year Rs. 20,00,000.
(*ii*) G. P. ratio—25%.
(*iii*) Current assets ratio—1·50.
(*iv*) Quick assets (cash and debtors) ratio 1·25.
(*v*) Stock turnover ratio —15.
(*vi*) Debts collection period - 1½ months.
(*vii*) Turnover to fixed assets 1·5.
(*viii*) Ratio of reserves to share capital—0·33 (*i.e.* 1/3)
(*ix*) Fixed assets to net worth 0·83 (*i.e.* 5/6).

(The term turnover refers to cost of sales and the term stock to closing stock).

Solution :

(A) *TUTORIAL NOTES* :

(1) Closing stock :

Sales	Rs. 20,00,000
Less : Gross Profit 25% on sales	Rs. 5,00,000
Cost of goods sold	Rs. 15,00,000

$$\text{Stock velocity} = \frac{\text{Cost of sales}}{\text{average stock}}$$

$$\therefore \quad \text{Average stock} = \frac{\text{Cost of sales}}{\text{Stock velocity}} = \frac{\text{Rs. } 15{,}00{,}000}{15}$$

$$= \text{Rs. } 1{,}00{,}000$$

As the term stock relates to closing stock, Rs. 1,00,000 is the closing stock.

(2) Fixed assets :

As the term turnover refers to cost of sales

$$\text{Fixed assets} = \frac{\text{Cost of sales}}{\text{Turnover to fixed assets}}$$

$$= \frac{\text{Rs. } 15{,}00{,}000}{1 \cdot 5}$$

$$= \text{Rs. } 10{,}00{,}000.$$

(3) Share capital and reserves :

$$\text{Fixed assets to net worth} = \frac{\text{Fixed assets}}{\text{Net worth}}$$

$$\therefore \quad \text{Net worth} = \frac{\text{Fixed assets}}{\text{Fixed assets to net worth ratio}}$$

$$= \frac{\text{Rs. } 10{,}00{,}000}{5/6}$$

$$= \text{Rs } 12{,}00{,}000.$$

As the ratio of reserves to share capital is 1 : 3 out of net worth Rs. 3,00,000 are reserves and the rest share capital (*i.e.*, Rs. 9,00,000)

(4) Book debts :

$$\text{Debt collection period (in terms of months)} = \frac{\text{Debtors}}{\text{Net sales}} \times 12$$

$$\therefore \quad \text{Debtors} = \frac{\text{Net sales} \times \text{Collection period}}{12}$$

$$= \frac{\text{Rs. } 20{,}00{,}000 \times 1 \cdot 5}{12}$$

$$= \text{Rs } 2{,}50{,}000.$$

(5) Current liabilities :

Current assets ratio	= 1·5
Quick assets ratio	= 1·25
Stock to current liabilities	0·25

$\therefore$ Current liabilities will be 4 times the stock = Rs. 4,00,000.

(6) Cash :

Current assets ratio = 1·5.

As the current liabilities are Rs. 4,00,000, the total of current assets would be Rs. 6,00,000.

Cash = Current assets − (Stock and debtors)
= Rs. 6,00,000 − (1,00,000 + 2,50,000)
= Rs. 2,50,000.

X Ltd.

(B) BALANCE SHEET

as on.........

Share capital	Rs. 9,00,000	Fixed assets		Rs. 10,00,000
Reserves	3,00,000	Current assets :		
Current liabilities	4,00,000	Cash	2,50,000	
		Debtors	2,50,000	
		Stock	1,00,000	
				6,00,000
	Rs. 16,00,000			Rs. 16,00,000

Illustration 29. Following are the final accounts of Kishore Bros. for the two years ending on 31st March, 1973 and 31st March 1974 :

PROFIT AND LOSS APPROPRIATION ACCOUNT FOR THE TWO YEARS

	1973	1974		1973	1974
To Reserve	Rs. 10,000	2,000	By Balance b/d	Rs. 6,000	6,000
To Dividends	2,000	4,000	By Profit of the current year (after taxation, interest on loan, except depreciation)	12,000	4,000
To Balance c/d	6,000	4,000			
	Rs. 18,000	10,000		Rs. 18,000	10,000

BALANCE SHEETS

	1973	1974		1973	1974
Equity share capital of Re. 1 each	Rs. 20,000	20,000	Goodwill at cost	Rs. 12,000	12,000
Capital reserve	4,000	6,000	Fixed assets (at cost)	28,000	32,000
Profit & Loss balance	6,000	4,000	Stocks	6,000	12,000
6% Loan on mortgage	16,000	16,000	Debtors	6,000	12,000
Trade creditors	10,000	14,000	Investments	2,000	—
Bank overdraft	—	4,000	Cash in hand	6,000	—
Taxation : Current	2,000	2,000			
Future	2,000	2,000			
	Rs. 60,000	68,000		Rs. 60,000	68,000

Additional information :

Sales during the first year amounted to Rs. 1,20,000 and in the second year to Rs. 1,00,000.

You are required to examine the above statements as to show the financial position and efficiency of the concern.

Solution :

The Solvency Position : For checking up the short-term solvency of the company (otherwise called liquidity of the company) following ratio shall be calculated.

$$\text{Current ratio} = \underset{1973}{\frac{\text{Current assets}}{\text{Current liabilities}}} \qquad \underset{1974}{\frac{\text{Current assets}}{\text{Current liabilities}}}$$

$$\frac{\text{Rs. } 20{,}000}{\text{Rs. } 12{,}000}=5:3 \qquad \frac{\text{Rs. } 24{,}000}{\text{Rs. } 20{,}000}=6:5$$

$$\text{Quick ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}} \qquad \frac{\text{Quick assets}}{\text{Current liabilities}}$$

$$\frac{\text{Rs. } 14{,}000}{\text{Rs. } 12{,}000}=7:6 \qquad \frac{\text{Rs. } 12{,}000}{\text{Rs. } 20{,}000}=3:5$$

Current Ratio and Quick Ratio of the company have deteriorated fro[illegible] 1973 to 1974 and hence short-term solvency of the company is not good. This weakening position of the company is further supported by the fact[illegible] such as, fall in sales from Rs 1,20,000 to Rs. 1,00,000; increase in the stoc[illegible] from Rs. 6,000 to Rs 12,000; and increase in total debtors from Rs. 6,00[illegible] to Rs. 12,000. Sales to debtors ratio shows

1973 *1974*

$$\frac{\text{Sales}}{\text{Debtors}}=\frac{\text{Rs. } 1{,}20{,}000}{\text{Rs. } 6{,}000}=20:1 \qquad \frac{\text{Rs. } 1{,}00{,}000}{\text{Rs. } 12{,}000}=8{\cdot}3:1$$

The ratio explains the poor collection of debts in 1974 and also fa[illegible] in total sales.

[illegible] of investment and cash in hand from 1974 balanc[illegible] [illegible] 1974 are also further sign[illegible] [illegible].

Long term Solvency. For testing long-term solvency, ratio of share[illegible] holders funds to total assets of the company is a satisfactory measure.

$$\text{Solvency} = \frac{\text{Shareholders funds}}{\text{Total Assets}}$$

1973 *1974*

$$=\frac{\text{Rs. } 32{,}000}{\text{Rs. } 60{,}000} \qquad =\frac{\text{Rs. } 32{,}000}{\text{Rs. } 68{,}000}$$

$$=8:15 \text{ or } 1:19 \text{ (approx)} \qquad =8:17 \text{ or } 1:2 \text{ (approx)}$$

This means that [illegible] the assets of the compan[illegible] shareholders contribution [illegible] he years. Sinc[illegible] the total assets have g[illegible] 8,000, interest o[illegible] outside parties has increased. Although long-term solvency of the compan[illegible] is established but it is thinning down and is a serious matter in the light o[illegible] bad liquid position.

Profitability and efficiency

$$\text{Profit earned on investment} = \frac{\text{Profit before tax and interest on loan}}{\text{Total assets}} \times 100$$

1973 *1974*

$$\frac{\text{Rs. } 12{,}000+\text{Rs. } 960}{\text{Rs. } 60{,}000}\times 100=21{\cdot}6\% \qquad \frac{\text{Rs } 4{,}000+\text{Rs. } 960}{\text{Rs. } 68{,}000}\times 100=7{\cdot}29\%$$

(Since tax is not known, it has not been added.)

Rate of profit [illegible] sharply from 21·6% [illegible] bad management of [illegible] of the company because

stable and satisfactory earnings company is not likely to meet its obligations to outside debts. Though more satisfactory results can be derived only after comparison with the standard rate of profit yet a rough and reliable conclusion can be drawn even by looking at this trend.

In the absence of necessary information other ratios like debtors turnover, stock turnover, rate of gross profit, operation expenses ratios, etc., have not been calculated.

Illustration 30. Towards the end of 1973 the directors of Wholesale Merchants Ltd decided to expand their business. The annual accounts of the company for 1973 and 1974 may be summarised as follows :

		Year 1973		*Year 1974*
Sales : Cash	Rs. 30,000		Rs. 32,000	
Credit	2,70,000		3,42,000	
		Rs. 3,00,000		Rs. 3,74,000
Cost of Sales		2,36,000		2,98,000
Gross Margin		64,000		76,000
Expenses : Warehousing		13,000		14,000
Transport		6,000		10,000
Administration		19,000		19,000
Selling		11,000		14,000
Debenture interest		—		2,000
		49,000		59,000
Net profit		Rs. 15,000		Rs. 17,000

		on 31st Dec. 1973		*on 31st Dec. 1974*
Fixed Assets (*less* depreciation)		Rs. 30,000		Rs. 40,000
Stock	Rs. 60,000		Rs 94,000	
Debtors	50,000		82,000	
Cash	10,000		7,000	
		1,20,000		1,83,000
Less : Current liabilities Trade Creditors		50,000		76,000
Net Current assets		70,000		1,07,000
		1,00,000		1,47,000
Share capital		75,000		75,000
Reserves and undistributed profit		25,000		42,000
Debenture loan		—		30,000
		1,00,000		1,47,000

You are informed that (*a*) All sales were from stocks in the company's warehouse. (*b*) The range of merchandise was not changed and buying prices ... sales ... on 1st ...

You are required to state the internal accounting ratios that you would use in this type of business to assist the management of the Company in measuring the efficiency of its operation, including its use of capital.

Your answer should name the ratios and give the figures (calculated to one decimal place) for 1973 and 1974, together with possible reasons for changes in the ratios for the two years. Ratios relating to capital employed should be based on the capital at the end of the year. Ignore taxation.

(C.A. Final—England)

Solution

(*i*) *Net profit before debenture interest : Total capital employed*

1973	*1974*
$\left\{\frac{\text{Rs. } 15,000}{\text{Rs. } 1,00,000}\times 100\right\}=15\%$	$\left\{\frac{\text{Rs. } 19,000}{\text{Rs. } 1,47,000}\times 100\right\}=12{\cdot}9\%$

The extra capital employed has not been used in a profitable manner. It appears to have been invested in stocks and debtors, which points to an expansion of the company's activities, but there has not been a corresponding increase in profit.

The ratio of creditors to debtors has moved from 1 : 1 to 1 : 1·1. Some of the fresh capital has been used to acquire extra fixed assets.

(*ii*) *Sales : Fixed assets*

1973	*1974*
(Rs. 3,00,000 : Rs. 30,000) = 10 : 1	(Rs. 3,74,000 : Rs. 40,000) = 9·4 : 1

The extra capacity in 1974 due to increase in fixed assets has not been made use of as intensively as in 1973.

(*iii*) *Sales : Total capital employed*

1973	*1974*
(Rs. 3,00,000 : Rs. 1,00,000) = 3 : 1	(Rs. 3,74,000 : Rs. 1,47,000) = 2·5 : 1

The velocity of capital turnover has decreased. This may be due to profits accruing during the year tied up in stocks and debtors through a too rapid rate of expansion in 1974.

(*iv*) *Net profit before debenture interest : Sales*

1973	*1974*
$\left(\frac{\text{Rs. } 15,000}{\text{Rs. } 3,00,000}\times 100\right)=5\%$	$\left\{\frac{\text{Rs. } 19,000}{\text{Rs. } 3,74,000}\times 100\right\}=5{\cdot}1\%$

The slight change in this ratio is the net result of greater changes in the ratios of gross profit and expenses to sales referred to in (*x*) and (*xi*) below.

(v) *Gross margin : Sales*

1973

$$\left(\frac{\text{Rs. } 64{,}000}{\text{Rs. } 3{,}00{,}000}\times 100\right)=21\cdot3\%$$

1974

$$\left(\frac{\text{Rs. } 76{,}000}{\text{Rs. } 3{,}74{,}000}\times 100\right)=20\cdot3\%$$

This may be due to (*a*) general reduction in basic selling prices, (*b*) lowering the prices intentionally to increase the demand, (*c*) bulk orders from buyers thus claiming trade discount.

(vi) *Expenses (excluding debenture interest) : Sales*

1973

$$\left\{\frac{\text{Rs. } 49{,}000}{\text{Rs. } 3{,}00{,}000}\times 100\right\}=16\cdot3\%$$

1974

$$\left[\frac{\text{Rs. } 57{,}000}{\text{Rs. } 3{,}74{,}000}\times 100\right]=15\cdot2\%$$

The change in this ratio is due to changes in the ratios of warehousing, transport and administration expenses to sales, which are as follows :

	1973 per cent	*1974* per cent
Warehousing expenses : sales	4·3	3·7
Transport expenses : sales	2·0	2·7
Administration expenses : sales	6·3	5·1
selling expenses : sales	3·7	3·7

(vii) *Sales : Stock*

1973

(Rs. 3,00,000 : Rs. 60,000)=5 : 1

1974

(Rs. 3,74,000 : Rs. 94,000)=4 : 1

This is due to holding of stock for a longer period in the warehouse in 1974 than in 1973. This may be the result of (*a*) Retailers being over-stocked in 1973, (*b*) Retailers might be thinking to place large orders in early 1975, (*c*) Increase in prices of raw materials in 1975 might have been anticipated by the company thus forcing them to stock goods.

(viii) *Credit sales : Debtors*

1973

Rs. 2,70,000 : Rs. 50,000)
=5·4 : 1

1974

(Rs. 3,42,000 : Rs. 82,000)
=4·2 : 1

This shows that credit periods allowed to customers have increased in 1974. This may be due to : (*a*) weak cash position of retailers due to lack of demand, (*b*) failure to follow up overdue accounts, (*c*) longer credit to increase sales.

(ix) *Current ratio*

1973

(Rs. 1,20,000 : Rs. 50,000)=2·4 : 1

1974

(Rs. 1,83,000 ; Rs. 76,000)=2·4 : 1

(x) *Liquidity ratio*

1973

(Rs. 60,000 : Rs. 50,000)=1·2 : 1

1974

(Rs. 89,000 : Rs. 76,000)=1·2 : 1

(*xi*) Fresh funds have been raised by issue of debentures The effect of this on various ratios connected with capital employed and gearing have

been given as follows :

	1973	1974
Capital employed : long-term liabilities	1 : 0	4·9 : 1
Capital employed : equity interest	1 : 1	1·2 : 1
Equity capital : fixed interest capital	1 : 0	3·9 : 1

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'TRUE' or 'FALSE'

1. Assets of electricity companies are known as 'Current assets'.

2. Profit and loss appropriation account is prepared to apportion the profit for two periods.

3. When all the figures in the balance sheet are expressed as percentage of the total it is called horizontal analysis.

4. A company need not pay income tax for that portion of the profit which is earmarked for debenture interest.

5. Too low sales in comparison to working capital indicates overtrading.

6. Gross profit is the ratio between the gross profit and net profit.

7. The calculation of earnings per share taking into account the possible conversion of debt and preferred stock is called 'Diluted Earnings Per Share'.

8. The two major purposes of financial analysis are solvency determination and profitability evaluation.

9. A larger physical volume of goods sold at smaller unit prices decreases the gross profit percentage.

10. Declaration of cash dividend by the company increases the quick ratio.

11. Issue of bonus shares to shareholders' decreases the earnings per share.

12. The debt collection period is a crude indicator of how well the credit policy of the company is being implemented

II. Fill in the blanks

1. *Bills receivable and debtors are. ..... . assets*

2. When ratios of current year are compared with previous years they are called... . ... .

3. Rate of return on equity share capital is calculated after deducting ....and.........dividend.

4. For dividend yield ratio.... .. price of the equity shares is taken into consideration.

5. Sales ratios may otherwise be called as . .. ..ratios.

6. When all the operating expenses are compared with . ... it is called operating expenses ratio.

7. Return on investment is the product of net profit margin and ....

8. Credit purchases made by the company... . ...the liquidity ratio.

9. Trading on equity means utilisation of certain resources involving payment of fixed interest/dividend in the hope of enhancing the rate of return to the......... .

10. The quick ratio is an indication of the company's ability to pay current obligations without the need to liquidate......... .

11. Liquidity is the ability of an organisation to meet its.........obligations out of its... . .. assets.

12. Turnover ratios indicate the efficiency in the utilization of........ whereas capital gearing ratios indicate the........of the capital.

III. Indicate the correct answer

1. Balance sheet may be described as
   - (*a*) a statement of sources and uses of capital
   - (*b*) balance of all assets at market value
   - (*c*) balance of all assets and liabilities at market value.

2. Long-term liabilities are
   - (*a*) borrowings for more than 10 years
   - (*b*) liabilities which do not require current assets for their payment
   - (*c*) fixed assets—current assets.

3. Earning per share is
   - (*a*) $\dfrac{\text{Net income} - \text{preference dividend}}{\text{Number of equity shares}}$
   - (*b*) $\dfrac{\text{Net income}}{\text{No. of shares}}$
   - (*c*) $\dfrac{\text{Total income}}{\text{Paid-up capital}}$

4. Working capital is the
   - (*a*) effective capital of the company when the business is in full swing
   - (*b*) capital borrowed from the banks
   - (*c*) difference between the current assets and current liabilities.

5. Current ratio is calculated to
   - (*a*) compare the current assets with past assets
   - (*b*) compare current assets with fixed assets
   - (*c*) measure the liquidity of a concern.

6. An equal increase in both current assets and current liabilities would
   - (*a*) decrease current ratio
   - (*b*) increase current ratio
   - (*c*) not affect the current ratio.

7. The ratio for resting immediate solvency is
   (a) current ratio
   (b) liquidity ratio
   (c) proprietary ratio.
8. A low proprietary ratio indicates
   (a) overtrading
   (b) undertrading
   (c) none of the above.
9. Collection of sundry debtors
   (a) increases current ratio
   (b) decreases current ratio
   (c) has no effect on the ratio.
10. Issue of shares in consideration for patents has its impact on
   (a) debtors turnover
   (b) current ratio
   (c) equity ratio.
11. The impact of a bad debt written off against the provision account on the *current ratio is to*
   (a) increase the ratio
   (a) decrease the ratio
   (c) none of the above.
12. Operating performance is best measured by the rate of return
   (a) on total assets
   (b) on fixed assets
   (c) on shareholders' equity.

IV. Match the following

1.	Current assets ratio	(a)	Long-term solvency
2.	Acid test ratio	(b)	Trading on equity
3.	Operating ratio	(c)	Profitability in relation to sales
4.	Equity ratio	(d)	Short-term solvency
5.	Capital gearing	(e)	Profitability in relation to investment
6.	Debtors turnover	(f)	Immediate solvency
7.	Return on investment	(g)	Operating efficiency
8.	Gross profit	(h)	Credit policy.

Questions

1. (a) Explain why ratio analysis is considered better than a mere comparison of figures in carrying out an overall appraisal of a company's business.

(b) Describe how three of the following ratios are compiled and indicate their utility in making a critical examination of a balance sheet: (i) Stock turnover ratio, (ii) Current ratio, (iii) Ratio of debtors to sales, (iv) Ratio of loans to owned capital (I.C.W.A., India, 1968)

2. You are required to explain the meaning and practical application of the following ratios: (a) Capital gearing ratios, (b) Quick assets ratio, (c) Ratio of sales to net worth, (d) Ratio of net profit on capital employed, (e) Current ratio. (I.C.W.A. India, 1970)

3. Write short notes on: (*a*) Window dressing, (*b*) Over-trading, (*c*) Low-geared capital, (*d*) Return on capital, (*e*) Current ratio.
(I.C.W.A., India, 1971)

4. A trader wants your opinion about the purpose and method of computation of the following ratios: (*i*) Stock turnover ratio, (*ii*) Net operating ratio, (*iii*) Expenses ratio.

You are required to submit a note for the purpose. (C.A. Inter, 1972)

5. State the purposes and mode of determining the following ratios: (*i*) Inventory ratio. (*ii*) Debtors ratio, (*iii*) Operating ratio.
(C.A. Inter, 1971)

6. Discuss the following accounting ratios and briefly explain their application: (*i*) Liquidity ratio, (*ii*) Working capital ratio, and (*iii*) Inventory ratio. (I. Bankers 1971, 1970, 1967)

7. Define any three of the following accounting ratios: (*i*) Liquid ratio, (*ii*) Proprietary ratio, (*iii*) Operating ratio, (*iv*) Net profit ratio, (*v*) Return on proprietor's funds. (B. Com., Bombay, 1971)

8. Discuss with illustrations any three of the following: (*i*) Liquid ratio; (*ii*) Stock working capital ratio; (*iii*) Capital gearing ratio; and (*iv*) Stock turnover ratio. (B. Com. Bombay, 1972)

9. The accounting ratios are very important for interpretation as they give valuable and very useful information about the business, its profitability, ability to honour its monetary commitments, working efficiency, and so on. Discuss the ratios which are generally used, while interpreting financial statements. [B. Com., (Hons.),Delhi, 1971]

10. Describe the following ratios and briefly explain their application: (*a*) Gross ratio, (*b*) Net profit ratio, (*c*) Operating ratio.
(C.A. Inter., 1967)

11. Explain briefly the meaning and usefulness of the following ratios: (*a*) Liquidity ratio, (*b*) Assets ratio, (*c*) Current ratio. (*d*) Liquid ratio, (*e*) Rate of turnover. (C.A. Final, 1957)

12. What are the limitations of ratio analysis. (C.A. Final, 1972)

13. Who requires the interpretation of financial statements? Are there any limitations to the interpretation of financial statements? Explain the following ratios and their utility to the businessman: (*a*) Operating ratio; (*b*) Turnover ratio; (*c*) Ratio of net sales to gross receivable.
(C.A. Final, 1963

Formulae

14. Show how will you calculate the following ratio: (*a*) Gross profit ratio, (*b*) Net profit ratio, (*c*) Debtors' turnover, (*d*) Stock turnover (*e*) Current ratio, (*f*) Liquid ratio, and (*g*) Operating ratio? 23·

15. Show how will you calculate the following ratios: (*a*) Fixed asset turnover, (*b*) Working capital turnover, (*c*) Stock turnover, (*d*) Debtors turnover, and (*e*) Total capital turnover? 23·

16. Show how will you calculate the following ratios: (*a*) Debt equity ratio, (*b*) Proprietary ratio, (*c*) Net worth ratio, (*d*) Equity ratio

(*e*) Debt ratio, and (*f*) Average age of receivables or collection period ? 23·3

17. Give purposes of calculating the following ratios : (*a*) Current assets ratio, (*b*) Acid test ratio, (*c*) Number of days sales in receivable, (*d*) Short-term solvency ratio. 23·4

18. *Give a list of important ratios which you will consider for* measuring : (*a*) Liquidity, (*b*) Funds management, and (*c*) Profitability. 23·5

19. Which ratios will you calculate for the following purposes : *(a) Financial analysis for investors in equity shares, (b) Financial analysis* for short-term creditors, (*c*) Financial analysis for long-term creditors ? 23·6

20. Assuming an excess of current assets over current liabilities, indicate the effect of the following upon the current ratios : (*a*) Collection [illegible] (*b*) Payment of an account payable, (*c*) Acquisi[illegible] Acquisition of merchandise for cash, [illegible] account. (C.A. Inter, 1964) 23·7

Exercises and Problems

1. Fill up the blanks by using suitable word from the following list : (*a*) common size statements, (*b*) inventory, (*c*) static, (*d*) vertical, (*e*) equity, (*f*) horizontal, (*g*) sales, (*h*) purchases.

(1) Analysis consists of a study of the behaviour of each of the items in a financial statement with the passage of time.

(2) Vertical analysis is considered to be ... type of analysis because it is a study of relationships existing at a particular date.

(3) Vertical or static measuring devices are...

(4) The ... ratio indicates the portion of the assets supplied by the owners.

(5) Common-size income statements present the various items as a percentage of....

(6) The acid-test ratio assumes that .. will not be converted to cash in time to pay current liabilities. [(*f*) ; (*c*) ; (*a*) ; (*e*) ; (*g*) ; (*b*)

2. The current ratio of a company is 2 : 1. Which of the following suggestions would improve the ratio, which would reduce it and which would not change it :

(*a*) To pay a current liability ; (*b*) To sell a motor car for cash at a slight loss ; (*c*) To borrow money on an interest-bearing promissory note ; (*d*) To purchase stocks for cash , and (*e*) To give an interest bearing promissory note to a creditor to whom money was owned on current account ? (C A. Final, 1972

(*Improve ; Improve ; Reduce , No effect ; No effect*

3. A limited company made credit sales of Rs 2,00,000 during the financial period. If the collection period is 36 days and year is assumed to be of 360 days, calculate : (*i*) debtors turnover ; (*ii*) average debtors and (*iii*) debtors at the end when debtors at the end are more than that at the beginning by Rs. 3,000. (*Debtors turnover 10 times*
Average debtors Rs. 20,000 ; Debtors at the end Rs. 21,500

	Year 2	Year 1
Net sales	Rs. 9,00,000	Rs. 7,50,000
Debtors, beginning of year	86,000	80,000
Debtors, end of year	1,17,000	86,000

	Year 2	*Year 1*
Debtors turnover	*8·9 times,*	*9 times,*
Avarage age of debtors	*41 days*	*41 days*

23·8

15. B. Raj & Co. sell their goods on cash as well as credit (though not on deferred instalment system). The following particulars are extracted from their books of account for the calendar year, 1963 :

Total gross sales	Rs. 1,00,000	Bills receivable as on 30-12-1963	Rs. 2,000
Cash sales (included in the above)	20,000	Provision for doubtful debts as on 31-12-1963	1,000
Sales returns	7,000	Total creditors as on 31-12-1963	10,000
Total debtors for sales as on 31-12-1963	9,000		

Calculate the average collection period. (C.A. Final, 1964)
(*55 Days*) 23·9

Note. Year has been taken of 365 days.

16. Following is the balance sheet of Spraylac Paints Limited as on 31st December, 1978 :

	Rs			Rs.
Creditors	6,000	Cash		5,000
Bills payable	10,000	Investments (Govt. securities)		15,000
Outstanding expenses	1,000	Sundry debtors		20,000
Taxation provision	13,000	Stock		30,000
Total current liabilities	30,000	Total current assets		70,000
6% Mortage debentures	70,000	Fixed assets	1,80,000	
7% Preference shares	10,000	*Less* : Depreciation provision	50,000	
Equity shares	50,000			1,30,000
Reserves and surplus	40,000			
Rs.	2,00,000	Rs.		2,00 000

Additional information

(*a*) Net sales 3,00,000
(*b*) Cost of goods sold 2,58,000
(*c*) Net income before tax 20,000
(*d*) Net income after tax. 10,000

Calculate solvency ratios. (M. Com., Madras Dec., 1979)

17. The following are the summarized profit and loss account of Vidarbha Limited for the year ending 31st December, 1976, and the balance sheet as on that date :

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Opening stock	99,500	By Sales	8,50,000
To Purchases	5,45,250	By Closing stock	1,49,000
To Incidental expenses	14,250		
To Gross profit	3,40,000		
Rs.	9,99,000	Rs.	9,99,000

To Operating expenses :		By Gross profit	3,40,000
Selling and distribution	30,000	By Non-operating income	
Administrative expenses	1,50,000	interest	3,000
Finance	15,000	By Profit on sale of shares	6,000
To Non-operating expenses :			
Loss on sales of assets	4,000		
To Net profit	1,50,000		
Rs	3,49,000	Rs.	3,49,000

BALANCE SHEET

	Rs		Rs.
Issued capital :		Land & buildings	1,50,000
2,000 Equity shares of		Plant & machinery	80,000
Rs. 100 each	2,00,000	Stock-in-trade	1,49,000
Reserves	90,000	Sundry debtors	71,000
Current liabilities	1,30,000	Cash and bank balance	30,000
Profit and loss account	60,000		
Rs.	4,80,000	Rs.	4,80,000

From the above statement you are required to calculate the following ratios :

(i) Current ratio
(ii) Operating ratio
(iii) Stock turnover
(iv) Retun on total resources
(v) Turnover of fixed assets (M. Com., Nagpur, April, 1979)

[(*i*) *1·92 : 1*, (*ii*) *83%*, (*iii*) *4 1*, (*iv*) *41·4%*, (*v*) *2·22*]

18. The following are the extracts from the financial statements of M/s. Efficient and Experts Ltd, as on 1-3-1974 and 1975 respectively :

	31-3-1974	*31-3-1975*
	Rs.	Rs.
Stock	10,000	25,000
Debtors	20,000	20,000
Bills receivable	10,000	5,000
Advances (recoverable in cash or kind)	2,000	—
Cash on hand	18,000	15,000
Creditors	25,000	30,000
Bills payable	15,000	20,000
Bank overdraft	—	2,000
9% Debentures 1990	2,00,000	2,00,000
Sales for the year	3,50,000	3,00,000
Gross profit	70,000	50,000

You are required to compute for both these years :

(1) Current ratio ; (2) Liquid ratio ; (3) Stock turnover ratio ; (4) Number of days outstanding of debtors ; (5) Stock-working capital ratio

(M. Com., Bombay June, 197[illegible])

19. The following are the financial statements of Albeit Company :

BALANCE SHEET
as on December 31, 1979

Equity share capital, Rs. 10 each	Rs. 50,000	Plant and equipment	Rs. 2,00,000
6% Preference share capital	20,000	*Less* Depreciation	1,60,000
Profit and loss account	44,000		40,000
$5\frac{1}{2}$% Mortgage loans	80,000	Inventory	1,00,000
Bills payable	30,000	Debtors (Previous year Rs. 40,000)	60,000
Taxes payable	20,000	Investments	24,000
		Cash	20,000
	Rs. 2,44,000		Rs. 2,44,000

PROFIT AND LOSS ACCOUNT
For the year ended December 31, 1979

To Stock in the beginning	Rs. 80,000	By Sales	Rs. 2,40,000
To Purchases	1,20,000	By Stock at the end	1,00,000
To Gross profit	1,40,000		
	Rs. 3,40,000		Rs. 3,40,000
To Operating expense :		By Gross profit	1,40,000
Selling expenses	30,000		
General and administrative expenses	40,000		
To Net operating income	70,000		
	Rs. 1,40,000		Rs. 1,40,000
To Interest expense :	4,200	By Net operating income	70,000
To income before tax	65,800		
	Rs. 70,000		Rs. 70,000
To Income taxes	29,800	By Income before tax	65,800
To Net income after tax	36,000		
	Rs. 65,800		Rs. 65,800

You are required to calculate : (*a*) Current ratio, (*b*) Acid test ratio, (*c*) Debtors turnover, (*d*) Number of days uncollectibles (assume a 360-day year), (*e*) Inventory turnover, (*f*) Number of times interest earned, (*g*) Earning per share (equity share), (*h*) Rate of return on equity shareholders' equity, (*i*) Rate of return on total assets, and (*j*) Total debts to shareholders' equity.
[(*a*) *4·08 : 1* (*b*) *2·08 : 1* (*c*) *4·8* (*d*) *75 days* (*e*) *1·1* (*f*) *16·67* (*g*) *Rs. 6·96* (*h*) *37%* (*i*) *16·5%* (*j*) *1·14:1*] 23·12

20. The following data are extracted from the published accounts of two companies in an industry.

	ABC Ltd.	XYZ Ltd.
	Rs.	Rs.
Sales	32,00,000	30,00,000
Net profits after tax	1,23,000	1,58,000
Equity capital (Rs. 10 per share fully		

Long-term debt	8,00,000	6,60,000
Creditors	3,82,000	5,49,000
Bank credit (Short term)	60,000	2,00,000
Fixed Assets	15,99,000	15,90,000
Inventories	3,31,000	8,09,000
Other current assets	5,44,000	4,52,000

You are required to prepare a statement of comparative ratios showing liquidity, profitability, activity and financial position of the two companies. **(C. A. (Final) Nov. 1979)**

PREPARATION OF FINAL STATEMENTS

21. The following statistics are available for the Star Light Ltd.

Gross profit percentage on sales	36%	Average accounts receivable	Rs. 1,00,000
Merchandise turnover	20 times	Income tax rate	40%
Average inventory	Rs. 9,600	Net income (after tax) as percentage of sales	12%

You are required to prepare profit and loss account for the Star Light Ltd. (*Gross profit Rs. 1,08,000* ; *Income before tax Rs. 60,000* *Income after tax Rs 36,000* ; *Sales Rs. 3,00,000*) 23·13

22. HAMSA Corporation had a fire during January, 1980, that destroyed most of its accounting records. Management asks you to try to prepare a balance sheet and an income statement for the year ended December 31, 1979. You have been able to uncover the following accounting data :

HAMSA Corporation

BALANCE SHEET
As on December 31, 1979

Share capital	Rs. 2,00,000	Fixed assets :		
Profits and reserves	3,00,000	Net plant and equipment	Rs.	?
Debentures at 5%	?	Current assets :		
Current liabilities :	?	Cash		?
Bills payable	?	Debtors		?
		Inventory		?
	Rs. ?		Rs.	?

HAMSA Corporation

PROFIT AND LOSS ACCOUNT
For the year ending 31st December, 1979

To Cost of goods sold	Rs. ?	By Net sales	Rs.	11,25,000
To Gross profit	?			
	Rs. 11,25,000		Rs.	11,25,000
To Operating expenses	?	By Gross profit		?
To Net operating income	?			
	Rs. ?		Rs.	?

To Interest	?	By Net operating income	?
To Net income before tax	?		
Rs.	?	Rs.	?
To Income tax at 50%	?	By Net income before tax	?
To Net income after tax	?		
Rs.	?	Rs.	?

Other financial data : (*a*) Debtors at the beginning of 1979 were Rs. 1,25,000 and based on a 360-day year. it took 40 days to collect accounts receivable during 1979. (*b*) Gross margin was 30 per cent of sales for 1979. (*c*) Inventory at the beginning of 1979 was Rs. 2,37,500 and the inventory turnover for 1979 was 3·15. (*d*) Total debts to equity for 1979 was 50 per cent. (*e*) For 1979, operating expenses were 6% of sales. (*f*) Interest was earned 27 times during 1979. (*g*) The acid test ratio for 1979 was 3·75.

You are required to: Reconstruct the December 31, 1979 balance sheet and profit and loss account for the year 1979 using the above financial data only. **23·14**

23. The following data represents the ratios pertaining to *X* Co Ltd for the year ending 31st March 1980.

	Rs.
Annual sales	40,00,000
Sales to net worth	4 times
Current liabilities to net worth	50%
Total debts to net worth	80%
Current ratio	2·2 times
Sales to inventory	8 times
Average collection period	40 days
Fixed assets to net worth	70%

From the above particulars prepare the balance sheet of *X* Co Ltd as on 31st March 1980. Assume that all sales are made on credit.

(*Balance sheet total Rs. 18,00,000*)

24. Z purchased a retail store and commenced business on July 1, 1979. From the following information you are required to prepare, in as much details as possible, a trading and profit and loss account for the year ended June 30, 1980 and a balance sheet as at that date :

Capital introduced on July 1, 1979	Rs. 47,000	Ratio of annual sales to year-end values of fixed assets *plus* working capital	2 : 1
Drawings during the year	5,000	Ratio of current assets to current liabilities at the year-end	2 : 1
Working capital (current assets *less* current liabilities) at June 30, 1980	23,000	Ratio of liquid assets (cash *plus* debtors) to current liabilities on June 30, 1980	5 : 4
Depreciation of fixed assets during the year, based on a rate of 10% per annum on cost. The fixed assets were all purchased on July 1, 1979	3,000		

Debtors at the year-end are equal to 12% of annual sales. General expenses (excluding depreciation) are equal to 20% of annual sales. The current assets consist of stocks (which are unchanged throughout the year),

debtors and cash. Stocks are turned over four times during the year. The current liabilities consist only of creditors.

(I.C.W.A.. England, 1970) 23·15

(*Net profit Rs. 8,000 ; Balance sheet total Rs. 73,000*)

25. From the following details, prepare statement of proprietary fund with as many details as possible : (*i*) Stock velocity = 6. (*ii*) Capital turnover ratio = 2. (*iii*) Fixed assets turnover ratio = 4. (*iv*) Gross profit turnover ratio 20 per cent. (*v*) Debtors velocity = 2 months. (*vi*) Creditors velocity 73 days.

The gross profit was Rs 60,000. Reserves and surplus amount to Rs. 20,000. Closing stock was Rs 5,000 in excess of opening stock.

[C A Final, 1970 ; M Com (Final), 1971 ; M Com. Meerut, 1974] 23·16

[*Proprietor's fund Rs. 1,20,000 ; Fixed assets Rs. 60,000 ; Debtors Rs. 50,000 ; Stock at the end Rs. 42,500 ; Cash Rs 16,500 ; Creditors Rs. 49,000*]

CRITICAL COMMENTS

26. Assume that you are analysing a company to determine whether you should make a short-term loan Further assume that you have calculated some ratios, given below, to help you determine whether the loan should be granted. Considering only the ratios given, would you lend the company money ? Discuss.

	1976	*1977*	*1978*	*1979*
Current ratio	2 to 1	2.2 to 1	2.5 to 1	[illegible]
Acid test ratio	1 to 1	0.9 to 1	0.85 to 1	0.17 to 1
Inventory turnover	8	7	6	5
Debtors (including bills receivable) turnover	7	6	5	4

23·17

27. The following comparative percentages are obtained from the financial statements of companies *A* Ltd and *B* Ltd :

	A Ltd	*B Ltd*
Net income (after tax) to sales	5	10
Net income (after tax) to shareholders' equity	12	8

Explain how you would interpret these data, and which company, in your opinion, appears to be more successful. (C.A Inter., 1966) **23·18**

28 The following is the balance sheet of Raman and Co Ltd on 31st March 1975. Comment on its financial stability.

Liabilities	Rs	*Assets*	Rs.
Share capital :		Land and buildings	70,000
1,00,000 shares of Re. 1 each	1,00,000	Plant and machinery	1,75,000
Profit and loss account	15,000	Stock-in-trade	1,00,000
General reserve	20,000	Sundry debtors	50,000
Development rebate reserve	10,000	Bills receivable	5,000
Bank overdraft	2,00,000	Cash at bank	22,000
Sandry creditors	50,000		
Bills payable	22,000		
Rs.	4,20,000	Rs.	4,20,000

[C.A. (Final) Nov. 1975]

Hint. Calculate current ratio, Acid test ratio, Debt equity ratio and proprietory ratio.

29. Below are given the summarised balance sheet and profit and loss account of Hero Private Ltd for the year ended 31st March, 1975 :

BALANCE SHEET
as at 31st March, 1975

Liabilities	Rs. (in lakhs)	*Assets*	Rs. (in lakhs)
Share capital :		Fixed assets	11
Rs. 10 share each	4	Liquid assets	3
Reserves and surplus	3	Current assets	5
Overdraft	4		
Current liabilities	8		
	19		19

PROFIT AND LOSS ACCOUNT
for the year ended 31st March, 1975

Liabilities	Rs. (in lakhs)	*Assets*	Rs. (in lakhs)
To Opening stock	2	By Net sales	28
To Net purchases	22	By Closing stock	3
To Expenses	3		
To Net profit	4		
	31		31

You are required to make comments on the capitalisation of the company, taking into account relevant ratios. [C.A. (Final) May 1975]

Hint. Calculate capital gearing ratio, Proprietary ratio, Current ratio, Liquid ratio, and Net profits to proprietary funds.

30. The balance sheets and trading and profit and loss accounts for the year ended June 30, 1978 of *S* Ltd and *T* Ltd are given below :

BALANCE SHEETS
as at June 30, 1978

	S Ltd		*T Ltd*	
Fixed assets at cost	60,000		30,000	
Less Provision for depreciation	20,000		10,000	
		Rs. 40,000		Rs. 20,000
Current assets				
Stock	57,000		30,000	
Debtors	22,000		20,000	
Cash	11,000		10,000	
	90,000		60,000	
Less Current liabilities	30,000		30,000	
		60,000		30,000
Net assets employed		Rs. 1,00,000		Rs. 50,000
Ordinary share capital, fully paid		95,000		45,000
Revenue reserve :				
Profit and loss account balance		5,000		5,000
		Rs. 1,00,000		Rs. 50,000

TRADING AND PROFIT AND LOSS ACCOUNTS

for the year ended June 30, 1978

	S Ltd		T Ltd	
Sales		Rs. 1,60,000		Rs. 1,20,000
Stock at July 1, 1977	39,000		20,000	
Add Purchases	1,14,000		85,000	
	1,53,000		1,05,000	
Less Stock at June 30, 1968	57,000		30,000	
Cost of goods sold		96,000		75,000
Gross profit		64,000		45,000
Less General expenses		56,000		39,000
Net profit for the year		8,000		6,000
Add Balance brought forward		3,000		1,000
		11,000		7,000
Less Dividend paid		6,000		2,000
Balance carried forward		Rs 5,000		Rs. 5,000

You may assume that stocks have increased evenly throughout the year. You are required to : (*a*) Calculate three of the following ratios separately for each company : (*i*) net profit for the year as a percentage of net assets employed at June 30, 1978 ; (*ii*) net profit for the year as a percentage of sales ; (*iii*) gross profit for the year as a percentage of sales ; (*iv*) current assets to current liabilities at June 30, 1978 ; (*v*) liquid ratio at June 30, 1978 ; and (*vi*) stock turnover during the year.

(*b*) Describe briefly the main conclusions which you draw from a comparison of the ratios which you have calculated for each company.

(I.C.W.A. England, 1968) 23·19

[*Net profit/Net assets 8%, 12% ; Net profit/sales 5%, 5% ; Gross profit/ sales 40%, 37½% ; Current ratio 3 : 1, 2 : 1 ; Liquid ratio 1·1 : 1, 1 : 1 ; Stock turnover 2 times, 3 times*].

31. The balance sheets of Trinkets Ltd as on June 30, 1978 and 1979 are as follows :

	1978 Rs. ('000)	1979 Rs ('000)		1978 Rs. ('000)	1979 Rs. ('000)
Ordinary share capital	2,000	2,000	Freehold property (at cost)	1,500	1,600
Reserves	1,500	1,600	Plant and machinery (at cost *less* depreciation	900	1,100
6% Debentures (unsecured)	500	500	Investments :		
Mortgage on freehold property (secured on one of the freehold properties, cost Rs. 10,00,000)	180	95	Associated companies (unquoted)	1,000	1,000
			Other companies (quoted)*	750	750

29. Below are given the summarised balance sheet and profit and loss account of Hero Private Ltd for the year ended 31st March, 1975 :

BALANCE SHEET
as at 31st March, 1975

Liabilities	Rs. (in lakhs)	*Assets*	Rs. (in lakhs)
Share capital :		Fixed assets	11
Rs. 10 share each	4	Liquid assets	3
Reserves and surplus	3	Current assets	5
Overdraft	4		
Current liabilities	8		
	19		19

PROFIT AND LOSS ACCOUNT
for the year ended 31st March, 1975

Liabilities	Rs. (in lakhs)	*Assets*	Rs. (in lakhs)
To Opening stock	2	By Net sales	28
To Net purchases	22	By Closing stock	3
To Expenses	3		
To Net profit	4		
	31		31

You are required to make comments on the capitalisation of the company, taking into account relevant ratios. **[C.A. (Final) May 1975]**

Hint. Calculate capital gearing ratio, Proprietary ratio, Current ratio, Liquid ratio, and Net profits to proprietary funds.

30. The balance sheets and trading and profit and loss accounts for the year ended June 30, 1978 of *S* Ltd and *T* Ltd are given below :

BALANCE SHEETS
as at June 30, 1978

	S Ltd		*T Ltd*	
Fixed assets at cost	60,000		30,000	
Less Provision for depreciation	20,000		10,000	
		Rs. 40,000		Rs. 20,000
Current assets				
Stock	57,000		30,000	
Debtors	22,000		20,000	
Cash	11,000		10,000	
	90,000		60,000	
Less Current liabilities	30,000		30,000	
		60,000		30,000
Net assets employed		Rs. 1,00,000		Rs. 50,000
Ordinary share capital, fully paid		95,000		45,000
Revenue reserve :				
Profit and loss account balance		5,000		5,000
		Rs. 1,00,000		Rs. 50,000

TRADING AND PROFIT AND LOSS ACCOUNTS

for the year ended June 30, 1978

	S Ltd		T Ltd	
Sales		Rs. 1,60,000		Rs. 1,20,000
Stock at July 1, 1977	39,000		20,000	
Add Purchases	1,14,000		85,000	
	1,53,000		1,05,000	
Less Stock at June 30, 1968	57,000		30,000	
Cost of goods sold		96,000		75,000
Gross profit		64,000		45,000
Less General expenses		56,000		39,000
Net profit for the year		8,000		6,000
Add Balance brought forward		3,000		1,000
		11,000		7,000
Less Dividend paid		6,000		2,000
Balance carried forward		Rs 5,000		Rs. 5,000

You may assume that stocks have increased evenly throughout the year. You are required to : (*a*) Calculate three of the following ratios separately for each company : (*i*) net profit for the year as a percentage of net assets employed at June 30, 1978 ; (*ii*) net profit for the year as a percentage of sales ; (*iii*) gross profit for the year as a percentage of sales ; (*iv*) current assets to current liabilities at June 30, 1978 ; (*v*) liquid ratio at June 30, 1978 ; and (*vi*) stock turnover during the year.

(*b*) Describe briefly the main conclusions which you draw from a comparison of the ratios which you have calculated for each company.

(I.C.W.A. England, 1968) 23·19

[Net profit/Net assets 8%, 12% ; Net profit/sales 5%, 5% ; Gross profit/ sales 40%, 37½% ; Current ratio 3 : 1, 2 : 1 ; Liquid ratio 1·1 : 1, 1 : 1 ; Stock turnover 2 times, 3 times].

31. The balance sheets of Trinkets Ltd as on June 30, 1978 and 1979 are as follows :

	1978 Rs. ('000)	*1979* Rs. ('000)		*1978* Rs ('000)	*1979* Rs ('000)
Ordinary share capital	2,000	2,000	Freehold property (at cost)	1,500	1,600
Reserves	1,500	1,600	Plant and machinery (at cost *less* depreciation	900	1,100
6% Debentures (unsecured)	500	500	Investments :		
Mortgage on freehold property (secured on one of the freehold properties, cost Rs. 10,00,000)	180	95	Associated companies (unquoted)	1,000	1,000
			Other companies (quoted)*	750	750

Creditors	300	300	*(Market value 1978 – Rs. 10,00,000 1979 Rs. 8,00,000)		
Proposed dividend (gross)	150	155	Stock	350	500
Taxation	140	250	Debtors	300	500
Overdraft (secured by a floating charge on assets	100	550	Bank	70	—
	Rs. 4,870	Rs. 5,450		Rs. 4,870	Rs. 5,450

In view of the credit squeeze, the managing director has been approached by the company's bank manager with a request to reduce the overdraft substantially—if possible by 50% within six months.

You are required to : (*a*) comment on the financial position revealed by the balance sheets, attaching to your commentary any schedule or statement which you think would assist ; and (*b*) state, with brief reasons, what additional information you would advise the bank manager to ask for which would help him to decide whether his request was reasonable.

(*C.A. Final, England*) **23·20**

32. *In* the course of discussing the financial position disclosed by the balance sheet as at December 31, 1979, the directors of the Overnight Printing Co Ltd seek your advice about their intention to expand their activities by 10%. They explain that a 10% *increase in turnover in the* ensuing year is likely to increase pro rata the year-end balances for fixed assets, debtors, stocks and trade creditors and to result in a total profit before tax for the year of Rs. 30,000, *out of which* Rs. 15,000 will be retained as tax payable at the year-end and Rs. 10,000 will have been paid away in dividend.

The directors ask you to demonstrate to them the effect of their proposals on the bank overdraft and the financial position generally. As a start, you have redrawn the last balance sheet as shown below :

STATEMENT OF FINANCIAL POSITION

December 31, 1979

	Rs.	Rs.	Rs.
Net current assets :			
Debtors	30,000		
Stocks	60,000		
		90,000	
Bank overdraft	20,000		
Trade creditors	30,000		
Tax payable	10,000		
		60,000	
			30,000
Fixed assets			70,000
			1,00,000
Long-term fixed loan			20,000
Shareholders' funds			80,000
Total assets			Rs. 1,60,000

You are required to : (*a*) prepare a similar statement as at Dec 31, 1980 based on the directors' expectations and intentions. (*b*) state three management ratios, obtainable from the financial statement shown above, which have significance in assessing the financial 'health' of a company; illustrate your answer by calculating and comparing the three ratios as at December 31, 1979 and 1980 ; and (*c*) discuss the significance of the changes in the ratios which have taken place, comparing 1980 with 1979.

(C.A. Final, England) 23·21

33. Extracts from financial accounts of *XYZ* Ltd are given below :

	Year I		*Year II*	
	Assets	Liabilities	Assets	Liabilities
Stock	Rs. 10,000	—	20,000	—
Debtors	30,000	—	30,000	—
Payment in advance	2,000	—	—	—
Cash in hand	*20,000*	—	*15,000*	—
Sundry creditors	—	25,000	—	30,000
Acceptances	—	15,000	—	12,000
Bank overdraft	—	—	—	5,000
	Rs. 62,000	40,000	65,000	47,000

Sales amounted to Rs 3,50,000 in the first year and Rs 3,00,000 in the second year. You are required to comment on the solvency position *of the concern with the help of accounting ratios.*

(C.A. Final 1971) 23 22

[*Current ratio 1·55 : 1, 1·38 : 1, Quick ratio 1·3 : 1, 0·96 : 1 Collection period 31 days, 36 days*]

34. The following summaries are prepared for you by the accountant of Adarsh Products Limited from the balance sheet of the company as at 31st December, 1978 :

	31-12-78	*Previous year*
Share capital : Ordinary shares of Rs. 100 each	Rs. 4,00,000	Rs. 3,50,000
Reserves and surplus :		
Premium on shares	20,000	20,000
General reserve	70,000	50,000
Surplus in profit and loss account	12,500	7,500
Shareholders' funds	Rs. 5,02,500	4,27,500
Current assets :		
Stock-in-trade	1,70,500	81,400
Sundry debtors	1,42,700	85,60[illegible]
Cash and bank balances	45,900	27,[illegible]
	3,59,100	1,94,[illegible]

Current liabilities :

Creditors	1,97,700	45,400
Proposed dividend	20,000	12,000
Provision for taxation	27,000	10,000
	2,44,700	67,400
Fixed assets (at cost)	4,70,000	3,71,100
Less depreciation	81,900	70,500
	Rs. 3,88,100	3,00,600

The following additional information is available from the company's books : (*i*) The profit for the year was Rs. 46,000. (*ii*) Income-tax Rs. 9,000 was paid during the year in respect of the previous year and the balance was transferred to general reserve account. (*iii*) The proposed dividend for the year 1977 was duly paid. You are required to prepare a statement showing (1) current ratio, (2) Liquid ratio, and (3) return on proprietors' funds, together with your comments. (C.A. Final)

[*Current ratio 1977—2·88 : 1 ; 1978—1·47 : 1 ; Liquid ratio 1977—1·67 : 1 ; 1978—0·77* : 1 ; *Return on proprietary funds 1978—9·4%*]

35. The annual accounts of a company for 1974 and 1975 are summarised as follows :

	1974 Rs.	1975 Rs.
Sales	36,00,000	44,88,000
Cost of sales	28.32,000	35,76,000
Gross Margin	7,68,000	9,12,000
Expenses :		
Warehousing	1,56,000	1,68,000
Transport	72,000	1,20,000
Administration	2,28,000	2,28,000
Selling	1,32,000	1,68,000
Debenture Interest	—	24,000
	5,88,000	7,08,000
Net Profit	1,80.000	2,04,000
	31-12-1974	31-12-1975
Fixed Assets (less depreciation)	3,60,000	4,80,000

Current Assets :		
Stock	7,20,000	11,28,000
Debtors	6,00,000	9,84,000
Cash	1,20,000	84,000
	14,40,000	21,96,000
Current Liabilities :		
Trade Creditors	6,00,000	9,12,000
Net Current Assets	8,40,000	12,84,000
Total	12,00,000	17,64,000
Share Capital	9,00,000	9,00,000
Reserves and Surplus	3,00,000	5,04,000
Debenture Loan	—	3,60,000
	12,00,000	17,64,000

Budgeted total sales for 1976 were Rs. 46,80,000.

Debenture loan was received on 1-1-1975 and additional Fixed Assets were purchased on that date.

You are required to state with your comments at least six relevant accounting ratios for measuring the efficiency of the operation and use of capital. [C. A. (Final) May 1977]

36 From the following balance sheets of Arun Narain & Co you are required to compute : (*a*) the following trend ratios using 1971 as the base year (100%)—(*i*) Current assets, (*ii*) Current (total) liabilities, (*iii*) Receivables, (*iv*) Non-current assets, and (*v*) Capital ; and (*b*) Prepare a common-size balance sheet for the three years to the nearest tenth of one per cent.

Arun Narain & Co

Liabilities and capital Rs	*1973* ('000)	*1972* ('000)	*1971* ('000)	*Assets* Rs	*1973* ('000)	*1972* ('000)	*1971* ('000)
Account payable	80	90	70	Cash	24	18	14
Accrued expenses	18	15	9	Accounts receivable (net of allowance for bad debts)	120	130	128
Taxes payable	32	20	31	Inventories	46	32	38
Total Current liabilities	130	125	110	Total Current assets	190	180	180
Share capital	110	100	100	Fixed assets (net of depreciation)	102	85	60
Retained earnings	60	45	40	Other Non-current assets	8	5	10
Total Capital	170	145	145	Total non-current assets	110	90	70
Total liabilities and capital	300	270	250	Total Current and non-current assets	300	270	250

changes in financial position deals with the flow of funds in general. It shows in detail the amount of funds the business received from each source and the amount of funds the business used for each purpose throughout the year. This statement was previously called a 'statement of sources and application of funds'. The other names in vogue were 'funds flow statement', 'statement of sources and uses', 'where got and where gone statement' and 'funds statement'.

The Meaning of 'Fund'

For purposes of this statement, the term 'funds' generally refers to cash and cash equivalents or to working capital. When a company retains earnings, the net tangible worth increases and therefore is a source of funds. But it does not mean that there is an increase in the cash to that extent as the accounts are preprepared on a mercantilistic basis. Similarly, no cash is involved when shares are issued in exchange for assets. Therefore, funds flow is a wider concept than cash flow. Working capital, as already stated is the difference between current assets and current liabilities. In other words, the term fund stands for net working capital or net current assets or 'free' current assets. The term 'flow' in the context or funds indicates the transfer of cash or cash equivalent from asset to equity or one equity to another equity or from one asset to another asset. However, the flow of funds must arise due to external and not the internal transactions of the business. For example, the capitalisation of reserves by the issue of bonus shares is an internal transaction. Such transactions are not included in the statement as there is no real addition to the funds of the company.

The main purpose of the statement of changes in financial position is to show the sources and uses of working capital during the accounting period. Thus it explains fully how the increase or decrease in working capital has taken place. If the total sources are more than the uses, it results in an increase in the working capital. On the other hand, if the total uses are more than the total sources it results in a decrease of the working capital. Thus, ultimately 'decrease in working capital' appears as a source whereas 'increase in the working capital' appears as a use. This figure of increase or decrease is explained in detail by additional disclosure regarding changes in individual working capital items and is called the 'schedule showing changes in working capital'.

Presentation*

Several forms of presentation are used for the *statement of changes in* financial position. For example, the statement may show the sources of funds as equal to the uses of funds. Another form of presentation is to show a difference between the sources and uses of funds which represents the net increase or decrease either in cash and cash equivalents or in working capital. In this case there must be additional disclosure regarding changes in the individual items of the working capital. Para 22 of IAS 7 states as follows :

"Each enterprise or group of enterprises should adopt the form of presentation for the statement of changes in financial position which is most informative in the circumstances."

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* Refer Techniques of Fund Reporting.

Sources and Uses of Working Capital

Flow of funds is said to have taken place when a business transaction makes a change in the amount of fund which existed just before the happening of a transaction. If the change results in the increase of fund then the transaction responsible for such a change is said to be a source of fund. For example, when merchandise is sold at a profit, the increase in cash or book debts resulting from sale is greater than the reduction in stock. If the change results in the decrease of fund then the transaction responsible for such a change is said to be the application or a use of fund, for example, the acquisition of a non-current asset by contracting a current liability or payment of cash towards trade expenses. If the transaction does not make any change in the fund that existed just before the happening of the transaction then such transaction does not result in the flow of fund. For example, the collection of book debts or payment of bills does not result in flow of [illegible] reduction in the book [illegible] total of working c[illegible] reduction in current [illegible] effect on the quantum of working capital.

Following are some of the principal sources and uses of the working capital.

Sources of Working Capital

(*a*) *Funds from Operations.* This is normally calculated by preparing profit and loss account. To the profit non-cash charges such as depreciation, goodwill, preliminary expenses, patents, deferred revenue expenditure and such other amounts written off are added. As the idea is to obtain funds from operations, adjustments are made with respect to profit or loss arising from sale of assets. In the long run this is the most important source and then only the business can survive.

Paragraphs 5 to 8 of IAS 7 dealing with funds provided from or used in operations are given below.

[illegible] funds from or used funds in its operations.

Items which do not relate to the ordinary activities of an enterprise are often presented in the income statement separately from income from the ordinary activities. This practice [illegible] single amount. For the purpose of this statement these items are referred to as 'unusual items'.

Different forms of presentation can be used to present the amount of funds provided from or used in the operations of an enterprise. A *method* commonly used is to show the net income (or loss) and to make adjustments for those revenues or expenses that do not involve a movement of funds in the current period (for example, depreciation). An alternative method is to begin with revenues that provided funds during the period [illegible]

and deduct the costs and expenses that involve a movement of funds. The resulting amount is described as funds from operations.

When unusual items are presented separately in a statement of changes in financial position, they also are adjusted to the extent that they do not involve a movement of funds in the current period.

The usual method of calculating funds from operations is shown below.

		Rs.
Net operating profit as per the profit and loss account		... ...
Add : Depreciation written off	Rs.	
Goodwill written off	... ...	
Preliminary expenses written off	... ...	
Discount, etc., written off	... ...	
Loss on sale of non-current assets written off	... ...	
		... ...
Funds from operations		... ...

It may be of interest to note here that a business may generate funds in spite of operating losses. For example, the operating loss of a company may be Rs. 20,000, but if its non-cash charges like depreciation, goodwill written off, discount written off amount to Rs. 30,000, the funds generated from operations work out to Rs. 10,000.

(*b*) *Proceeds from the sale of long-term assets.* This amounts to conversion of a non-current asset to a current asset and is a souree of funds regardless of the fact whether the asset is sold for a gain or loss. For example, a machinery originally costing Rs. 50,000 on which an amount of Rs. 20,000 has been written off by way of depreciation may be sold for Rs. 25,000. Rs. 25,000 is a source although machinery has been sold for a loss of Rs. 5,000. Again, the funds from operations will be higher than its operating profit by Rs. 5,000, as the loss debited to profit and loss account is a non-cash charge.

(*c*) *Issue of long-term debt.* Long-term borrowing such as issue of debentures and convertible bonds results in the increase of current asset (cash) and therefore an increase in the working capital, In the case of short-term borrowing the increase in the current asset is offset by an increase in the current liability and therefore results in no change in working capital.

(*d*) *Issue of shares for cash or other assets.* Issue of shares results in an inflow of current assets and is, therefore, a source. In the case of proprietary and partnership concerns additional capital introduced is a source of funds.

Sometimes there may be exchange transactions as part of the financing and investing activities of an enterprise. For example, a limited company may allot shares of Rs. 10,00,000 to acquire a building. This transaction does not result in the increase or decrease of any current asset or current liability and has, therefore, no effect on the working capital. Still

the statement shows such exchange transactions because such a transaction can be viewed as [illegible] sactions : (1) The issue of [illegible] the purchase of building. [illegible] can be included in the statement both as a source and a use of working capital. Similarly, there may be exchange transactions involving the exchange of one form of security for another. An example of such a transaction is the conversion of long-term debt to equity shares. Para 11 of IAS 7 reads as follows :

"To achieve the objective of the statement of changes in financial position, it may be necessary to disclose separately the investment and financing aspects of each type of transaction For example, the proceeds of long-term assets are presented separately from the outaly for acquisition of long-term assets and when an asset is acquired through the issue of long-term debt or equity, the issue of debt or equity and the acquisition of the asset are separately disclosed."

Uses of Working Capital

(*a*) *Dividends in cash.* The two ways of dealing with proposed dividend and the subsequent payment have been discussed subsequently. To state briefly if the proposed dividend is treated, as a current liability, actual payment will not be shown as an application, whereas, if it is shown as a non-current liability, actual dividend paid will be shown as an application.

(*b*) *Outlays for the purchase of long-term assets.* The purchase of long-term assets, such as plant and equipment, either reduces current assets and/or increases current liabilities. Consequently, the working capital is reduced.

(*c*) *Redemption and payment of long-term debt.* Repayment of a short-term debt is not a use of fund, since both current assets and current liabilities are reduced by the same amount. But the payment of a long-term debt results in the reduction of a current asset and is therefore a use of fund. Even if a long-term debt is cancelled by issuing new securities, the cancellation is shown as a use and the issue of new securities as a source.

(*d*) *Redemption or repurchase of shares.* When cash is paid to redeem or repurchase shares, working capital is reduced and therefore is a use of funds.

Procedure for knowing whether a transaction makes any change in the fund. In order to know whether a transaction makes any change in the existing amount of the fund the following procedure is suggested :

(*a*) Journalise the transaction

(*b*) Find out the category of accounts affected by the transaction For example, when a building is purchased for cash, the following entry is made.

Debit Building account
Credit Cash account

Building account is a non-current asset and cash account is a current asset. All accounts are classified into current assets, current [illegible] non-current assets and non-current liabilities. The explanation

assets and current liabilities is already given in Chapter 1 of this section. The explanation of non-current accounts is given subsequently.

(*c*) Transactions which affect only current assets or current liabilities (*i.e.*, current category) do not result in the flow of funds. For example, when goods are purchased on credit, it increases stock as well as sundry creditors and therefore has no effect on working capital and such transactions are ignored for preparing a statement of changes in financial position.

(*d*) Transactions which affect only non-current accounts again have no effect on the flow of funds. But certain exchange transactions* are viewed as both a source and use of working capital although the transaction itself does not change the amount of fund.

(*e*) If one aspect of the entry affects a current asset or current liability account and another aspect affects a non-current account, the transaction results in flow of fund (may be either inflow or outflow). Where the transaction results in an inflow of fund, it increases the working capital. On the other hand when it results in an outflow of fund, it results in the decrease of working capital.

Non-current accounts. For the purpose of funds flow analysis all accounts which are not current accounts are treated as non-current account. Thus, accounts included in the list given on the next page are treated as non-current accounts :

Provision for tax. There are two different ways of treating this item in the funds flow statement. *First method* : As per this method the provision for tax is treated as internal appropriation and thus non-current liability. As will be seen later on that under this method it is used for calculating the profit made during the year and tax paid during the year is treated as an application of fund. This method has been adopted throughout the chapter unless otherwise mentioned. *Second method* : As per this method tax provision made during the year is treated as current liability. If this is the treatment then provision for tax made during the year is not used for adjusting the profit made during the year for calculating the source from operation and tax paid during the year is *not* treated as an application of fund. This method has not been adopted in solving the problems.

Proposed dividend. Like tax provision, proposed dividend is also treated in two ways. In this book, proposed dividend has been treated as non-current liability and thus dividend paid during the year is shown as an application. If proposed dividend is treated as current liability then it is not used for adjusting the profit made during the year for calculating the source of profit and tax paid during the year is *not* shown as an application of fund.

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* Discussed under 'sources of working capital—(*d*) Issue of shares for cash or other assets' in page FSA-114

General reserve, dividend equalisation fund, and other appropriations. They are appropriations of profit made during the year and are thus treated as non-current liabilities. They are used for adjusting the profit made during the year for calculating source from operation.

LIST OF NON-CURRENT ACCOUNTS

Non-current accounts on the liability side of balance sheet	*Non-current accounts on the asset side of balance sheet*
1. Equity share capital	1. Goodwill
2. Preference share capital	2. Land
3. Redeemable preference shares	3. Building
4. Long-term loans (loans unless specified otherwise are treated as long-term loans)	4. Machinery
5. Debentures	5. Furniture
6. Share premium account	6. Long-term investments
7. Forfeited shares	7. Patent rights
8. Profit and loss account (credit balance)	8. Trade mark
9. Appropriation of profit, *e g*, transfer to general reserve, dividend equalisation fund, insurance fund, compensation fund, debenture sinking fund, capital redemption reserve account.	9. Profit and loss account (debit balance)
10. Provisions like provision for tax, provision for depreciation on fixed assets, proposed dividend	10. Discount on issue of shares and debentures
11. Capital reserve	11. Preliminary expenses
	12. Other deferred expenditures like advertisement cost

In order to understand the rules, we take the following examples :

Transactions involving accounts from current category only and thus not resulting in the flow of fund

Transaction 1. On July 1, 1974 Hovers Ltd collected cash from its debtors Rs. 10,000. The transaction has been analysed as under :

Journal entry	*Category of account*	*Conclusion*
Cash account *Dr.* 10,000 To Debtors account 10,000	Current asset Current asset	No flow of fund because both the accounts of the journal entry belong to current category.

Explanation. This transaction results in increase in cash from Rs. 40,000 to Rs. 50,000 and decrease in debtors from Rs. 80,000 to Rs. 70,000. But, in any case, total current assets of Hovers Ltd remain at Rs, 3,00,000 and current liabilities at Rs 1,30,000. Thus the fund, being the difference between the two, remains unchanged. It can be said that this transaction does not result in the flow of fund.

Transaction 2. On July 2, 1974 Hovers Ltd discharged its trade creditors Rs. 5,000 and bills payable Rs. 10,000. The transaction has been analysed as under :

Journal entry	Category of account	Conclusion
Creditors Dr. 5,000 Bills payable Dr. 10,000 To Cash 15,000	Current liability Current liability Current asset	No flow of fund because all the accounts of the journal entry belong to current category.

Explanation. This transaction decreases cash from Rs. 50,000 to 35,000, creditors from Rs. 1,00,000 to Rs. 95,000, and bills payable from Rs. 30,000 to Rs. 20,000. The decrease in cash reduces the total current assets from Rs. 3,00,000 to Rs. 2,85,000, and decrease in creditors and bills payable reduces the total current liabilities from Rs. 1,30,000 to Rs. 1,15,000 The difference between total current assets and total current liabilities, as they stand now, is Rs. 1,70,000 (*i.e.*. Rs. 2,85,000—Rs. 1,15,000). Since the difference after the happening of transaction is the same as it was before this does not result in the flow of fund.

Transaction 3. On July 10, 1974 Hovers Ltd issued bills payable of Rs. 2,000 to its trade creditors The transaction has been analysed as under ;

Journal entry	Category of account	Conclusion
Creditors Dr. 2,000 To Bills payable 2,000	Current liability Current liability	No flow of fund because both the accounts of the transactions belong to current category.

Explanation. This transaction reduces trade creditors from Rs. 95,000 to Rs. 93,000 and increases bills payable from Rs, 20,000 to Rs. 22,000. In any case, the total current liabilities after the happening of this transaction remain at Rs. 1,15,000 (*i.e.*, Rs. 93,000+22,000) at which they were before the happening of the transaction. Since this transaction does not touch the total current assets on the one hand and keeps current liabilities at the old figure on the other, the difference between the two remains unchanged. Thus this transaction does not result in the flow of fund.

Now, the following conclusion can be repeated :

> When all the accounts of the journal entry of a transaction belong to current category (*i.e.*, when all accounts are either current assets, or current liabilities, or when one account is a current asset and the other current liability) then that transaction does not result in the flow of fund.

Transactions involving accounts from non-current category only and thus not resulting in the flow of fund

Transaction 4. On July 12, 1974 Hovers Ltd exchanged its one building, book value Rs. 8,000, for a piece of land of the same amount at a more favourable site. The transaction has been analysed as under :

Journal entry	Category of account	Conclusion
Land Dr. 8,000 To Building 8,000	Non-current asset Non-current asset	No flow of fund because both the accounts in the journal entry belong to non-current category.

Transaction 5. On July 20, 1974 Hover Ltd converted its debentures of Rs. 30,000 into equity shares. The transaction has been analysed as under :

Journal entry	Category of account	Conclusion
Debenture Dr. 30,000 To Equity share capital 30,000	Non-current liability Non-current liability	No flow of fund because both the accounts in the journal entry belong to non-current category.

Transaction 6. On July 31, 1974 Hovers Ltd purchased land worth Rs. 20,000 and issued equity shares for discharging the price of land. The transaction has been analysed as under :

Journal entry	Category of account	Conclusion
Land Dr. 20,000 To Equity share capital 20,000	Non-current asset Non-current liability	No flow of fund because both the accounts in the journal belong to non-current category.

Explanation. The above three transactions 4, 5, and 6 do not make any change in either current assets or current liabilities and consequently no change in the fund. They do not result in the flow of fund. However, these exchange tranactions are, as stated earlier, shown in the statement both as source and application of funds.

Now the following conclusion can be repeated :

> **When all the accounts of the journal entry of a transaction belong to non-current category (*i.e.*, when all accounts are either non-current assets or non-current liabilities or when one account is a non-current asset and the other one is a non-current liability) then that transaction does not result in the flow of fund.**

Transactions involving accounts from current and non-current categories and thus resulting in the flow of fund

Transaction 7. On August 10, 1974, Hovers Ltd, purchasd building for cash Rs. 15,000. The transaction has been analysed as under :

Journal Entry	Category of account	Conclusion
Building a/c Dr. 15,000 To Cash a/c 15,000	Non-current asset Current asset	This results in the flow of fund as one account belongs to durrent category and the other to non-current category.

Explanation. This transaction reduces cash of Hovers Ltd from Rs. 35,000 to Rs. 20,000 (see transaction 2) and ultimately reduces total current

assets from Rs. 2,85,000 to Rs. 2,70,000 (see transaction 2). Since this transaction reduces current assets without reducing current liabilities (which are at Rs. 1,15,000), the difference between the two (*i.e.*, fund) is reduced from Rs. 1,70,000 to Rs. 1,55,000 (*i.e.*, Rs. 2,70,000—Rs. 1,15,000). As this transaction has resulted in the change of fund, there is a *flow* of fund. Further, since this transaction has reduced the fund, it is said to be an application of fund.

Transaction 8. On August 14, 1974 Hovers Ltd issued for cash equity shares of Rs. 50,000. This transacsion has been analysed as under :

Journal Entry	*Category of account*	*Conclusion*
Bank *Dr.* 50,000 To Equity share capital 50,000	Current asset Non-current liability	This results in the flow of fund as one account belongs to current category and another to non-current category.

Explanation. This transaction increases bank balance from Rs. 20,000 to Rs. 70,000. This ultimately increases current assets from Rs. 2,70,000 to Rs. 3,20,000. This transaction increases current assets without increasing current liabilities. Therefore, the difference between the two increases from Rs. 1,55,000 to Rs. 2,05,000 (*i.e.*, Rs. 3,20,000—Rs. 1,15,000). Since the difference between current assets and current liabilities has been affected, there is a *flow* of fund. As the transaction has increased the fund is said to be a *source* of fund.

Analysis of some more transactions

In order to facilitate the thorough understanding of the concept, some more transactions have been analysed.

TABLE SHOWING ANALYSIS OF TRANSACTIONS

(Abbreviations used : C/A=current assets ; C/L=current liability ; N/A=Non-current asset ; N/L Non-current liability)

S. No.	*Transaction*	*Journal entry (without amount)*	*Category of account*	*Whether or not transaction results in flow of fund*	*Source or Application*	*Reason*
1	2	3	4	5	6	7
1	Bills receivable collected	Bank *Dr.* To Bills receivable	C/A C/A	No	—	Both the accounts belong to current category
2	Goods purchased for cash	Purchases (goods)* *Dr.* To Bank	C/A C/A	No	—	Both the accounts belong to current category

* Goods purchased is treated as current assets. When goods are sold then cost of goods sold becomes an expense. To the extent of cost of goods sold there is a flow (application) of fund. This has been explained later in the chapter.

1	2	3	4	5	6	7
3	Goods purchased on credit	Purchases (goods) *Dr.* To Creditors	C/A C/L	No	—	Both the accounts belong to current category
4	Bills payable paid	Bills payable *Dr* To Bank	C/L C/A	No	—	Both the accounts belong to current category
5	Building purchased and shares issued in satisfaction of purchase price	Building *Dr.* To Share capital	N/A N/L	No	—	Both the accounts belong to non-current category
6	General reserve created	P & L Appro. *Dr.* To General reserve	N/L N/L	No	—	Both the accounts belong to non-current category
7	Debenture sinking fund created	P & L Appro *Dr* To Deb. sinking fund	N/L N/L	No	—	Both the accounts belong to non-current category
8	Transferred to taxation provision	P & L *Dr.* To Tax provi.	N/L N/L	No	—	Both the accounts belong to non-current category
9	Transferred to development rebate reserve	P & L Appro *Dr* To Dev. rebate reserve	N/L N/L	No	—	Both the accounts belong to non-current category
10	Transferred to dividend equalisation fund	P & L Appro. *Dr.* To Dividend equalisation fund	N/L N/L	No	—	Both the accounts belong to non-current category
11	Preliminary expenses written off	P & L *Dr.* To Preliminary exp.	N/L N/A	No	—	Both the accounts belong to non-current category
12	Goodwill written off	P & L *Dr.* To Goodwill	N/L N/A	No	—	Both the accounts belong to non-current category
13	Transferred to capital redemption reserve account	P & L Appro. *Dr.* To C.R.R. a/c	N/L N/L	No	—	Both the accounts belong to non-current category
14	Building purchased on credit	Building *Dr* To Creditor	N/A C/L	Yes	Appli.	One account belongs to current category and the other to non-current category
15	Loan repaid	Loan *Dr.* To Bank	N/L C/A	Yes	Appli.	One account belongs to current category and the other to non-current category

1	2	3	4	5	6	7
	Redeemable preference shares redeemed	R.P.S. Cap. *Dr.* To Bank	N/L C/A	Yes	Appli.	One account belongs to current category and the other to non-current category
	Debentures redeemed	Debentures *Dr.* To Bank	N/L C/A	Yes	Appli.	One account belongs to current category and the other to non-current category
18	Building sold for cash	Bank *Dr.* To Building	C/A N/A	Yes	Source	One account belongs to current category and the other to non-current category
19	Building sold on credit	Debtors *Dr.* To Building	C/A N/A	Yes	Source	One account belongs to current category and the other to non-current category
20	Current assets purchased and shares issued in payment of purchase price	Cur. assets *Dr.* To Share capital	C/A N/A	Yes	Source	One account belongs to current category and the other to non-current category
21	Redeemable preference shares converted into equity shares	R.P.S. *Dr.* To Equity share capital	N/L N/L	No	—	Both the accounts belong to non-current category

Analysis of some other transactions of difficult nature

Sometimes accounts involved in the transactions do not belong to any of the four categories mentioned above, *viz.*, current assets, current liabilities, non-current assets, and non-current liabilities. For example, when rent is paid rent account involved in the transaction does not belong to any of the categories given above. These accounts, which pose such a problem are of *revenue* nature. Like any other account of revenue naure, these ar also transferred to either profit and loss account or suitable provision o reserve account. For example, rent account, salary account, insuran premium account, cost of goods sold account, wages account, fuel accou are transferred to profit and loss accouut. But bad debts account is tra ferred to provision for doubtful debts account, dividend paid account proposed dividend account, tax paid account to provision for tax acco After having transferred the accounts of revenue nature to proper accou the consolidated entry is made, then the categories of accounts are es lished, and then conclusions are drawn. For example, if rent paid is 500 then the procedure would be as under :

Step 1. Make journal entry for the payment of rent :

Rent account	*Dr*	500	
To Bank account			500

Step 2. Make journal entry for closing the rent account :

Profit and loss account	*Dr.*	500	
To Rent account			500

Step 3. Make a consolidated entry from the above two journal entries and analyse the transaction. Because of the above two entries the rent account stands cancelled. Now the consolidated entry and its analysis will be as given below.

Consolidated Journal entry	*Categories of accounts*	*Whether or not flow*	*Source or application*	*Reason*
Profit and loss a/c *Dr.* 500 To Bank account 500	N/L C/A	Yes	Application	One account belongs to current category and the other to non-current category

Keeping the above procedure in mind the table on page FSA-124 analyses some more transactions of this nature.

How to know that transaction has taken place

Thus far we were given very clearly the transactions that took place in the business, for example, rent paid, dividend paid, building purchased, shares issued for cash, debentures converted into shares Sometimes, these are not given as clearly as above. Under such circumstances students are [illegible] dates [illegible] infor- [illegible] shares [illegible] that there is a source of fund of Rs. 50,000 Similarly, if figures under the heading land appear at Rs. 1,75,000 and Rs 2,70,000 respectively and as additional information nothing is given then the student can safely conclude that bunisess must have purchased land of Rs 95,000. This transaction, if analysed, will show that there is an application of fund of Rs. 95,000. Similarly, if it is found that under the heading general reserve figures on two different dates appear at Rs. 70,000 and Rs. 85,000 respectively, then a conclusion can be drawn that the business created a reserve of Rs. 15,000. An analysis of this transaction will reveal that this is neither a source nor an application of fund.

Digging out hidden transactions

Often a student is confronted with a situation where he is not able to locate easily transactions taking place in the business. In such circumstances it is advised that he should prepare accounts For example, if balance sheets on two different dates show building account at Rs 1,60,000 and Rs 1,73,000 respectively and as information it is given that depreciation on building has been provided to the extent of Rs. 34,600 then the transaction taking place during the year can be identified by preparing building account as under :

BUILDING ACCOUNT

To Opening balance	Rs. 1,60,000	By Depreciation	Rs 34,600
To Purchases (balancing figure)	47,600	By Closing balance	1,73,000
	Rs. 2,07,600		Rs. 2,07,600

TABLE SI NG ANALYSIS OF TRANSACTIONS

(Abbreviations used C/A=current assets, C/L=current liabilities, N/A=Non-current assets, N/L=Non-current liabilities)

S. No.	Transactions	Journal entry	Consolidated entry	Categories of accounts	Whether or not flow of fund	Source or application	Reason
1	Commission paid	(a) Com. Dr. To Cash (b) P & L a/c Dr. To Com.	P & L a/c Dr. To Cash	N/L C/A	Yes	Appli.	One account belongs to current category and the other to non-current category
2	Commission outstanding	(a) Com. Dr. To Com. outstanding a/c (b) P & L a/c Dr. To Com. a/c	P & L a/c Dr. To Com. outstanding a/c	N/L C/L	Yes	Appli.	One account belongs to current category and the other to non-current category
3	Tax paid	(a) Tax Dr. To Bank (b) Prov. for tax Dr. To Tax	Prov. for tax Dr. To Bank	N/L C/A	Yes	Appli.	One account belongs to current category and the other to non-current category
4	Depreciation on fixed asset	(a) Depre. Dr. To Fixed asset (b) P & L a/c Dr. To Depre.	P & L a/c Dr. To Fixed asset	N/L N/A	No	—	Both the accounts belong to non-current category
5	Cash sales	(a) Cash Dr. To Sales (b) Sales Dr. To P & L a/c	Cash Dr. To P & L a/c	C/A N/L	Yes	Source	One account belongs to current category and the other to non-current category
6	Credit sales	(a) Debtors Dr. To Sales (b) Sales Dr. To P & L a/c	Debtors Dr. To P & L a/c	C/A N/L	Yes	Source	One account belongs to current category and the other to non-current category
7	Dividend paid	(a) Dividend Dr. To Bank (b) Proposed dividend Dr. To Dividend	Proposed dividend Dr. To Bank	N/L C/A	Yes	Appli.	One account belongs to current category and the other to non-current category

From the above account it is clear that the company purchased a building of Rs. 47,600 (not Rs. 13,000 which is the difference between Rs. 1,73,000 and Rs, 1,60,000). Once the transaction is known students can analyse it and find out that there is an application of fund of Rs. 47,600.

Take another example. If balance sheets on two different dates show machinery account at Rs. 1,85,600 and Rs. 1,73,800 [illegible] ectively and as ar [illegible] Rs. 30,000 and [illegible] e beginning of the year for Rs 3,100, then hidden information can be revealed by preparing machinery account as given below :

MACHINERY ACCOUNT

To Opening balance	Rs	1,85,6[illegible]	By Depreciation	Rs.	30,000
To Purchases (balancing figure)		23,200	By Cash (sale)		3,100
			By Profit and loss account (loss on sale Rs. 5,000 – 3,100)		1,900
			By Closing balance		1,73,800
	Rs.	2,08,800		Rs.	2,08,800

Students can now conclude that there is a purchase of machinery of Rs. 23,200. After analysing they can easily know that there is an application of fund of Rs. 23,200. So far as source of fund of Rs 3,100 on the sale of machinery is concerned it is easy to find out because it has already been given in the information.

Calculation of fund from operation

1. **Sale of goods.** Funds are generated by transactions like · (*i*) Issue of shares for cash ; (*ii*) Issue of share as a consideration for the purchase of current assets ; (*iii*) Issue of debentures for cash or for current assets ; (*iv*) Taking long-term loans ; (*v*) Sale of fixed assets, *e.g.*, land, building, machinery, furniture either for cash or on credit and so on. But the most important source of fund is the profit earned by the business. This is called fund from operation. The main business of a firm is not to sell fixed assets or issue shares or debentures. These are casual transactions The regular source of fund is the sale of *goods*. How the fund is created from the sale of goods can be seen below :

(*i*) *When goods are sold on cash/credit basis* .

Cash/debtors account Dr.

To Sales account

(*ii*) *When sales account is transferred to profit and loss account* :

Sales account Dr.

To Profit and loss account

(*iii*) *Consolidated entry derived from the above two entries* :

Cash/debtors Dr. (Current asset)

To Profit and loss account (Non-current liability)

Since the effect of sale of goods is ultimately to increase current assets, it is a source of fund.

2. **Purchase of goods and stock-in-trade in the beginning.** The goods which are sold belong partly to the stock-in trade in the beginning and partly to purchases made in the current year. Stock in the beginning and purchases are shown on the debit side of profit and loss account. They

result in application of fund as explained below :

(*a*) *For stock in the beginning* :

Profit and loss account Dr. (Non-current liability)
To Stock in beginning (Current asset)

(*b*) *For the purchase of goods* :

(*i*) When goods are purchased :

Purchases account Dr.
To Cash/creditors

(*ii*) When purchases account is transferred to trading account :

Profit and loss account Dr.
To Purchases account

(*iii*) Consolidated entry derived from the above two entries :

Profit and loss account Dr. (Non-current liability)
To Cash/creditors (Current asset/current liability)

3. **Stock at the end.** In entry (*b*) above all purchases of goods are treated as an application of fund. In fact to the extent they remain unsold there is no application of fund. In order to correct the above statement, stock at the end is shown on the credit side of profit and loss account. This results in the *source* of fund which can be seen from the following journal entry :

Stock at the end account Dr. (Current asset)
To Profit and loss account (Non-current liability)

Thus it can be concluded that :

(*a*) Sale of goods results in the source of fund.

(*b*) Stock in the beginning and purchase of goods during the current year result in application of fund.

(*c*) Stock at the end results in the source of fund.

4. **Gross profit/Gross loss.** Instead of treating sales and stock at the end as source and stock in the beginning and purchases of goods as application, it is recommended that the difference be treated as net source if there is gross profit or as net application if there is gross loss.

5. **Expenses paid.** When expenses are paid, they result in the applications of fund Thus wages paid, salaries paid, rent paid are the application of fund. This is clear from the following journal entries.

(*i*) *Entry for the payment of an expense* :

Expense account Dr.
To Cash account

(*ii*) *Entry for transferring expense account to profit and loss account* :

Profit and loss account Dr.
To Expense account

(*iii*) *Consolidated entry derived from the above two entries* :

Profit and loss account Dr. (Non-current liability)
To Cash account (Current asset)

6. **Expenses outstanding.** When expenses are outstanding then too they result in the application of fund. The following entries make it clear

(*i*) *Adjustment entry for expense outstanding*:

Expense account Dr.
To Expense outstanding account

(*ii*) *Entry for transferring expense account to profit and loss account*:

Profit and loss account Dr.
To Expense account

(*iii*) *Consolidated entry derived from the above two entries*:

Profit and loss account Dr. (Non-current liability)
To Expense outstanding account (Current liability)

7. **Net Profit.** If all expenses, paid or outstanding, are application of fund then net profit derived after deducting expenses from the gross profit must be the net source Thus instead of showing sales and stock at the end as source, and stock in the beginning, purchases, expenses paid, and [illegible] ed that the net [illegible] net application if there is net loss.

Calculation of source when profit made during the year is given

(*i*) *Adjustment relating to depreciation, preliminary expenses, etc.* Net profit given in the problem is *generally not* equal to the source from operation. The net profit is generally affected by some expenses like depreciation on fixed assets, preliminary expenses which do *not* result in the application of fund (see pages FSA-121, 124). Goodwill, patent rights, [illegible] which affect [illegible] The calcula- [illegible] ring the year has been given has been explained in the following illustrations.

Illustration 31. Calculate fund from operation from the following profit and loss account.

PROFIT AND LOSS ACCOUNT

		Rs.		Rs.
To Stock in the beginning		32,000	By Sales	10,00,000
To Purchases	40,000		By Stock at the end	80,000
Less Returns	8,000			
		32,000		
To Wages paid	20,000			
Add Outstanding	10,000			
		30,000		
To Gross profit		9,86,000		
	Rs.	10,80,000	Rs.	10,80,000
To Rent		10,000	By Gross profit	9,86,000
To Salary	30,000			
Less Prepaid	5,000			
		25,000		
To Depreciation on furniture		3,000		
To Discount on issue of shares		10,000		
To Goodwill written off		5,000		
To Preliminary expenses		6 000		
To Net profit		9,27,000		
	Rs.	9,86,000		

result in application of fund as explained below :

(a) *For stock in the beginning* :

Profit and loss account Dr. (Non-current liability)
To Stock in beginning (Current asset)

(b) *For the purchase of goods* :

(i) When goods are purchased :

Purchases account Dr.
To Cash/creditors

(ii) When purchases account is transferred to trading account :

Profit and loss account Dr.
To Purchases account

(iii) Consolidated entry derived from the above two entries :

Profit and loss account Dr. (Non-current liability)
To Cash/creditors (Current asset/current liability)

3. **Stock at the end.** In entry (b) above all purchases of goods are treated as an application of fund. In fact to the extent they remain unsold there is no application of fund. In order to correct the above statement, stock at the end is shown on the credit side of profit and loss account. This results in the *source* of fund which can be seen from the following journal entry :

Stock at the end account Dr. (Current asset)
To Profit and loss account (Non-current liability)

Thus it can be concluded that :

(a) Sale of goods results in the source of fund.

(b) Stock in the beginning and purchase of goods during the current year result in application of fund.

(c) Stock at the end results in the source of fund.

4. **Gross profit/Gross loss.** Instead of treating sales and stock at the end as source and stock in the beginning and purchases of goods as application, it is recommended that the difference be treated as net source if there is gross profit or as net application if there is gross loss.

5. **Expenses paid.** When expenses are paid, they result in the applications of fund Thus wages paid, salaries paid, rent paid are the application of fund. This is clear from the following journal entries.

(i) *Entry for the payment of an expense* :

Expense account Dr.
To Cash account

(ii) *Entry for transferring expense account to profit and loss account* :

Profit and loss account Dr.
To Expense account

(iii) *Consolidated entry derived from the above two entries* :

Profit and loss account Dr. (Non-current liability)
To Cash account (Current asset)

6. **Expenses outstanding.** When expenses are outstanding then too they result in the application of fund. The following entries make it clear.

(*i*) *Adjustment entry for expense outstanding*:

Expense account Dr.
  To Expense outstanding account

(*ii*) *Entry for transferring expense account to profit and loss account*:

Profit and loss account Dr.
  To Expense account

(*iii*) *Consolidated entry derived from the above two entries*:

Profit and loss account Dr. (Non-current liability)
  To Expense outstanding account (Current liability)

7. Net Profit. If all expenses, paid or outstanding, are application of fund then net profit derived after deducting expenses from the gross profit must be the net source Thus instead of showing sales and stock at the end as source, and stock in the beginning, purchases, expenses paid, and e[illegible] ed that the net d[illegible] net application if there is net loss.

Calculation of source when profit made during the year is given

(*i*) *Adjustment relating to depreciation, preliminary expenses, etc.* Net profit given in the problem is *generally not* equal to the source from operation. The net profit is generally affected by some expenses like depreciation on fixed assets, preliminary expenses which do *not* result in the application of fund (see pages FSA-121, 124). Goodwill, patent rights, discount on issue of shares and debentures are other examples which affect the net profit but do not result in the applications of fund. The calculation of source of fund from operation when profit made during the year has been given has been explained in the following illustrations.

Illustration 31. Calculate fund from operation from the following profit and loss account.

PROFIT AND LOSS ACCOUNT

		Rs		Rs.
To Stock in the beginning		32,000	By Sales	10,00,000
To Purchases	40,000		By Stock at the end	80,000
Less Returns	8,000			
		32,000		
To Wages paid	20,000			
Add Outstanding	10,000			
		30,000		
To Gross profit		9,86,000		
	Rs.	10,80,000	Rs.	10,80,000
To Rent		10,000	By Gross profit	9,86,000
To Salary	30,000			
Less Prepaid	5,000			
		25,000		
To Depreciation on furniture		3,000		
To Discount on issue of shares		10,000		
To Goodwill written off		5,000		
To Preliminary expenses		6,000		
To Net profit		9,27,000		
	Rs.	9,86,000	Rs.	9,86,000

Solution : Source from operation can be calculated in two ways. 1st method starts from net profit and then adjust it in the light of non-cash charges like depreciation. 2nd method starts with sales (because that is the main source of fund) and deduct therefrom all such expenses which result in application of fund. Both the methods are shown below :

1st Method		Rs.	*2nd Method*		Rs.
Net profit made during the year		9,27,000	*Sources :*		
Add Expenses and items not resulting in the application of fund :			Sales	10,00,000	
Depreciation	3,000		Stock at the end	80,000	10,80,000
Discount	10,000		*Less Applications :*		
Goodwill	5,000		Stock in the beginning	32,000	
Preliminary expenses	6,000	24,000	Net purchases	32,000	
			Wages	30,000	
			Rent	10,000	
			Salary	25,000	1,29,000
Fund from operation	Rs.	9,51,000	Fund from operation	Rs.	9,51,000

(ii) *Adjustment relating to gain or loss an sale of a non-current asset.* Any gain or loss on the sale of non-current assets like building, land, equipment, long-term investments must be carefully eliminated for calculating funds from net profit. *The gain must be deducted from and the loss must be added to the net profit.*

Illustration 32. A building standing in books at Rs. 30,000 was sold for Rs. 42,000. The gain on sale of building was taken to profit and loss account thus taking the net profit to Rs. 1,70,000. You are required to calculate fund from operation.

Solution : In the above example total net profit is Rs. 1,70,000. It includes gain on the sale of building Rs. 12,000. Fund from operation or source from profit will be calculated by deducting Rs. 12,000 from Rs. 1,70,000, which works out to Rs. 1,58,000. When building was sold for Rs. 42,000, cash (current asset) was debited and was treated as source from the sale building. Rs. 12,000 includes the gain of Rs. 12,000. If it is not eliminated from the profit then it will result in double counting.

Illustration 33. Calculate fund from operation from the following profit and loss account.

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Expenses paid and outstanding	3,00,000	By Gross profit	4,50,000
To Depreciation	70,000	By Gain on sale of land	60,000
To Loss on sale of machine	4,000		
To Discount	200		
To Goodwill	20,000		
To Net profit	1,15,800		
Rs.	5,10,000	Rs.	5,10,000

Solution.

Net profit as per profit and loss account		Rs. 1,15,800
Add Depreciation	Rs. 70,000	
Loss on sale of machinery	4,000	
Discount	200	
Goodwill	20,000	
		94,200
		2,10,000
Less Gain on sale of land		60,000
Source from operation		Rs. 1,50,000

Calculation of source/application when profit/loss made during the year is not given

Because students are generally given balance sheets on two different dates they often find that they are given opening and closing balances of profit and loss account instead of profit made during the year. But in order to make the statement of sources and uses, it is essential for them to know the source from profit. For this it is necessary to prepare profit and loss account. This is done as given below :

Debit side. Show the following items on the debit side of profit and loss account : (*i*) Depreciation on fixed assets ; (*ii*) Loss on sale of fixed assets ; (*iii*) Decrease in discount on shares and debentures ; (*iv*) Decrease in goodwill ; (*v*) Decrease in preliminary expenses ; (*vi*) Increase in general reserve ; (*vii*) Increase in dividend equilisation account ; (*viii*) Increase in debenture sinking fund ; (*ix*) Increase in any other revenue reserve ; (*x*) Provision for tax created during the year ; (*xi*) Dividend proposed during the year ; and (*xii*) Closing credit balance of profit and loss account as given in the balance sheet of the current year.

Credit side. Show the following items on the credit side of profit and loss account : (*i*) Opening credit balance of profit and loss account as given in the balance sheet of the previous year ; (*ii*) Gain on sale of fixed assets ; (*iii*) Decrease in the revenue reserve (if such decrease is due to transfers to profit and loss account).

Now profit and loss account is balanced and figure thus arrived at is either a source of fund (if the balancing figure falls on the credit side) or an application of fund (if the balancing figure falls on the debit side).

Preparation of profit and loss account has not been illustrated here as its preparation is required in almost all the illustrations given in the chapter now onward.

✓USES OF THE FUND STATEMENT

After understanding with clear mind the concept of "fund" and "flow of fund", it is essential to know as to what is the necessity of preparing such statements. Fund or working capital is the life of any business. The importance of the availability of correct amount of fund and its proper use can in, no way, be overemphasised. Under such a situation control of fund for the best results becomes a must. Fund Flow Statement is one of the tools for managing favourably this working capital. Its

potential purpose is to reveal the comparative position of working capital on the two balance sheets dates. It also enables the management to know with reasons the basic causes of the changes in net working capital. In doing so, as an incidental advantage, it also reflects major changes in policy decisions made during the period with respect to capital structure and asset expansion. While spotting the changes and its causes in the working capital, it successfully manages to highlight the current area of the business. Thus fund statement, in general, is able to present that information which either is not available or not readily apparent from an analysis of other financial statements.

To make the above discussion more precise some questions have been enumerated below on which a funds statement might throw some light.*

1. Where did profits go ?
2. Why were dividends not larger ?
3. How was it possible to distribute dividends in excess of current earnings, or in the presence of net loss for the period ?
4. Why are the net current assets down although the net income is up ?
5. How is it that the net current assets are up even though there was net loss for the period ?
6. Why must money be borrowed to finance purchases of new plant and equipment ?
7. How was the expansion in plant and equipment financed ?
8. What happened to the proceeds of the sale of plant and equipment resulting from a contraction of operations ?
9. How was the retirement of debt accomplished ?
10. What became of the assets derived from an increase in outstanding capital stock ?
11. What became of the proceeds of the bond issue ?
12. How was increase in working capital financed ?

The main purposes of reporting flow of funds to shareholders are (1) to disclose to them the investing and financing policies pursued by the company in the year under review. The statement will enable the shareholders to know the new assets acquired by the business and how it was financed and (2) to point out the financial strength and weakness of the business.

The statement can also be used as a tool of planning by the management. Projected statements will help the management to decide (1) the sources, amount and timing of financing and (2) the uses of new funds for various purposes on priority basis. Such statements will help the management to evolve suitable dividend policy, and take appropriate decisions regarding acquisition of assets. National Association of Accountants states the following uses of fund statement :

(*a*) Estimating the amount of funds needed for growth.

(*b*) Improving the rate of income on assets.

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* Perry Mason : "*Cash Flow*" *Analysis and the Funds Statement* (Accounting Research Study No. 2, New York : American Institute of Certified Public Accountants, 1961), pp. 49–50.

(c) Planning the temporary investment of idle funds.
(d) *Securing additional* working capital when needed.

(e) Securing economies in the centralized management of cash in organizations whose management is decentralized.

(f) Planning the payment of dividends to stockholders and interest to creditors.

(g) Easing the effects of an insufficient cash balance.*

TECHNIQUES OF FUND REPORTING

The funds statement is still in the process of development and as such no standard form of presentation has been adopted. However, irrespective of form of presentation there is a clear-cut and definite effort of accountants to keep the statement simple and understandable. The funds statement is usually presented in one of the following forms :

(a) the report form—Remainder Type,
(b) *the report form—Self-balancing Type,*
(c) the report form—Reconciling Type.

The report form—Remainder Type is generally used. Under this method funds provided and funds used are tabulated in two separate groups and net increase or net decrease in working capital appears as a resultant at the bottom of the statement.

In Self-balancing Type method, though the sources of funds and application of funds are shown *under two separate heads, the two totals* are always made equal by putting the difference on the side the total is less. For example if sou
then Rs 30,000 are shown
to make the total of applic
is called *increase*
is called *decrease*

In Reconciling type method, like bank reconciliation statement, the statem
year.
cation
at the end of the year.

All these three types of methods are explained through the *following illustration.*

Illustration 34. From the following two balance sheets as on December 31, 1979 and 1980, you are required to prepare a statement of sources and uses :

Capital and liabilities	*Dec. 31, 1980*	*Dec. 31, 1979*	*Assets*	*Dec. 31, 1980*	*Dec. 31, 1979*
Share Capital	Rs. 2,50,000	2,00,000	Cash	Rs 47,000	30,000
Trade creditors	45,000	70,000	Debtors	1,15,000	1,20,000
Profit and loss account	23,000	10,000	Stock-in-trade	90,000	80,000
			Land	60,000	50,000
	Rs. 3,18,000	2,80,000		Rs. 3,18,000	2,80,000

* National Association of Accountants : *N A A Research Report No 38,* "Cash Flow Analysis for Managerial Control" (New York : N.A A., 196[illegible] 6-10.

Solution

STATEMENT OF SOURCES AND USES
For the year ending 31st Dec., 1980

First Method
Report Form—Remainder Type*

Sources of Fund :		
Provided by increase in profit from operation	Rs.	13,000
Provided by increase in share capital		50,000
Total fund provided		63,000
Application of Fund :		
Fund applied in purchase of land		16,000
Net increase in working capital	Rs.	47,000

Second Method
Report Form—Self-balancing Type

Sources of Fund :		
Provided by profits	Rs.	13,000
Provided by capital		50,000
Total fund provided	Rs.	63,000
Application of Fund :		
Applied in purchase of land		16,000
Applied in increase of working capital		47,000
	Rs.	63,000

Third Method
Report Form—Reconciling Type†

Cash		Rs. 30,000
Debtors		1,20,000
Stock		80,000
		2,30,000
Less Creditors		70,000
Net working capital on December 31, 1979		1,60,000
Add Sources of fund :		
Increase in profits	13,000	
Increase in share capital	50,000	
		63,000
Total funds generated		Rs. 2,23,000
Less Application of fund :		
Applied in purchase of land		16,000
Working capital on 31st Dec. 1980		Rs. 2,07,000
Working capital at the end can be verified :		
Total current assets at the end		Rs. 2,52,000
Less Current liabilities at the end		45,000
Net working capital		Rs. 2,07,000

CONSTRUCTING THE SCHEDULE OF CHANGES IN WORKING CAPITAL

The second part of the funds statement is the schedule of changes in working cepital. This schedule, unlike statement of sources and uses, is prepared with the help of only current assets and current liabilities. The change in the amount of any current asset in the current year in comparison to that in the previous year results either in increase or decrease in working capital. This difference is recorded for each individual current asset. If a particular current asset in the current year is more than that in the previous year then the difference is recorded in the 'debit' column. If a particular current liability is more in the current year than that in the previous year, the difference is recorded in the 'credit' column. This process is repeated until all accounts relating to current assets and current liabilities appeaing in the two balance sheets are gone through and differences are properly recorded. The two columns are balanced. The balancing figure is either increase or decrease in the working capital. This amount must be equal to the amount revealed by the statement of Sources and Uses of Funds. *It may be remembered that schedule of changes in working capital is prepared*

* This method has been adopted in the book.

† This method has been adopted in the next chapter for preparing cash flow statement.

only from accounts appearing in the balance sheets. There is no effect of [illegible] of this piece of information and can prepare first the schedule of changes in working capital (where there are no complications and hidden transactions) and can know in advance the answer to be disclosed by the statement of sources and uses. Illustration 35 shows the working.

Sometimes, the Schedule of Changes in Working Capital is prepared with two additional columns for the changes in non-current assets and non-current liabilities. If this is done, then the balancing figure of these columns is always *equal to the balancing figure of the columns* meant for current assets and current liabilities.

Illustration 35. From the following balance sheets of *X* Ltd you are required to prepare schedule of changes in working capital and a statement of flow of fund

	Dec. 31, 1979	*Dec 31, 1980*		*Dec 31, 1979*	*Dec. 31, 1980*
Capital and liabilities:	Rs.	Rs	*Assets*:	Rs.	Rs.
Capital	80,000	85,000	Land and building	50 000	50,000
Profit and loss appropriation account	14,500	24,500	Plant	24,000	34,000
Creditors	9,000	5,000	Stock	9,000	7,000
Mortgage	—	5,000	Debtors	16,500	19,500
			Cash and bank	4,000	9,000
Rs.	1,03,500	1,19,500	Rs.	1,03,500	1,19,500

Solution

X Ltd.

SCHEDULE OF CHANGES IN WORKING CAPITAL

	Dec 31, 1979	*Dec. 31, 1980*	*Changes in current assets and current liabilities*		*Changes in non-current assets and non-current liabilities*	
			Dr.	*Cr.*	*Dr.*	*Cr.*
Capital and liabilities	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Capital	80,000	85,000	—	—	—	5,000
Profit and loss a/c	14,500	24,500	—	—	—	10,000
Creditors	9,000	5,000	4,000	—	—	—
Mortgage	—	5,000	—	—	—	5,000
Rs.	1,03,500	1,19,500				
Assets:						
Land and building	50,000	50,000	—	—	—	—
Plant	24,000	34,000	—	—	10,000	—
Stock	9,000	7,000	—	2,000	—	—
Debtors	16,500	19,500	3,000	—	—	—
Cash at bank	4,000	9,000	5,000	—	—	—
Rs.	1,03,500	1,19,500				
Net increase in working capital (balancing figure)				10,000*	10,000*	
Rs.			12,000	12,000	20,000	20,000

* The balancing figure of these columns must always be the same

Sometimes the column for changes in non-current assets and liabilities is not provided for in this schedule but use of this column is recommended as it provides a test good check of arithmetical accuracy because the balance of the two columns must be the same if calculations are correct.

STATEMENT OF FUNDS
For the year ended 31st Dec. 1980

		Rs.
Sources of Fund:		
Provided by profits		10,000
Provided by additional share capital		5,000
Provided by mortgage		5,000
Total Funds provided	Rs.	20,000
Application of Fund:		
Applied for purchasing plant		10,000
Net Increase in working capital	Rs.	**10,000**†

A note to student :

1. (*a*) Increase in assets is put in the debit column.
   (*b*) Decrease in assets is put in the credit column.
   (*c*) Increase in liability is put in the credit column.
   (*d*) Decrease in liability is put in the debit column.

2. Only those items which appear in the columns meant for non-current assets and non-current liabilities are dealt with in the statement of sources and uses. Accounts appearing in the columns meant for current assets and current liabilities do not find place in the statement of sources and uses.

2—EXAMINATION QUESTIONS

Illustration 36. The following are the summarised Balance Sheets of *XYZ* Ltd, as on 31st March, 1970 and 1971 :

BALANCE SHEETS

	1970	*1971*		*1970*	*1971*
Capital:			Fixed Assets Rs.	41,000	40,000
7% Redeemable Preference Shares Rs.	—	10,000	*Less* Depreciation	11,000	15,000
Equity Shares	40,000	40,000		30,000	25,000
	40,000	50,000	*Current Assets:*		
General Reserve	2,000	2,000	Debtors	20,000	24,000
Profit & loss account	1,000	1,200	Stock	30,000	35,000
Debentures	6,000	7,000	Prepaid expenses	300	500
Current Liabilities:			Cash	1,200	3,500
Creditors	12,000	11,000			
Provision for taxation	3,000	4,200			
Proposed dividends	5,000	5,800			
Bank overdraft	12,500	6,800			
Rs.	81,500	88,000	Rs.	81,500	88,000

† This figure is always equal to that disclosed by the schedule of changes in working capital. See figure in bold type.

You are required to prepare : (i) A statement showing changes in the working capital, and (ii) A statement of sources and applications of funds. (B. Com. (Hons.), Delhi, 1973)

Solution :

STATEMENT OF CHANGES IN WORKING CAPITAL

	1970 Rs.	1971 Rs.	Changes in current assets and liabilities Dr.	Cr	Changes in non-current assets and liabilities Dr.	Cr.
Assets :						
Fixed assets†	41,000	40,000	—	—	—	1,000
Debtors	20,000	24,000	4,000	—	—	—
Stock	30,000	35,000	5,000	—	—	—
Prepaid expenses	300	500	200	—	—	—
Cash	1,200	3,500	2,300	—	—	—
	92,500	1,03,000				
Liabilities :						
Equity shares	40,000	40,000	—	—	—	—
7% Redeemable preference shares	—	10,000	—	—	—	10,000
General reserve	2,000	2,000	—	—	—	—
Profit and loss account	1,000	1,200	—	—	—	200
Debentures	6,000	7,000	—	—	—	1,000
Creditors	12,000	11,000	1,000	—	—	-
Provision for taxation	3,000	4,200	—	1,200	—	—
Proposed dividend	5,000	5,800	—	800	—	—
Bank overdraft	12,500	6,800	5,700	—	—	—
Depreciation on fixed assets†	11,000	15,000	—	—	—	4,000
	92,500	1,03,000				
Net increase in working capital			—	16,200	16,200	—
			18,200	18,200	16,200	16,200

STATEMENT OF SOURCES AND USES

Sources :		
Issue of redeemable preference shares	Rs.	10,000
Issue of debentures		1,000
Source from operation		4,200
Sale of fixed assets		1,000
Total sources		16,200
Applications		nil
Net incerase in working capital	Rs.	16,200

† It is always goods to show all provisions (which have been shown by deducting from assets in the balance sheet) on the liability side and assets as gross figure instead of net figure in the schedule of changes in working capital.

utorial Notes 1. Since question classifies provision for tax and proposed dividend as current liabilities, they will not affect the flow of fund.

2. It has been assumed that fixed assets are shown at cost less accumulated depreciation. In view of this assumption, Rs. 4,000 being additional depreciation made during the year have been shown on the debit side of profit and loss account. Decrease in value of cost price of fixed assets has been assumed as sale of fixed assets. In the absence of any information, it has been further assumed that there is no profit, no loss and no accumulated depreciation on that part of fixed asset which has been sold.

(3) DEPRECIATION ACCOUNT

	Rs.		Rs.
To closing balance	15,000	By Opening balance	11,000
		By Profit and loss account (depreciation provided)	4,000
Rs.	15,000	Rs.	15,000

(4) ASSETS ACCOUNT

	Rs.		Rs.
To Opening balance	41,000	By Sales (source)	1,000
		By Closing balance	40,000
Rs.	41,000	Rs.	41,000

(5) PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Depreciation	4,000	By Opening balance	1,000
To Closing balance	1,200	By Source from operation (balancing figure)	4,200
Rs.	5,200	Rs.	5,200

Illustration 37. From the following balance sheets of *A* Ltd make out (*i*) Statement of changes in the working capital, and (*ii*) Fund flow statement.

BALANCE SHEETS (YEAR END)

Liabilities	*1969* Rs.	*1970* Rs.	*Assets*	*1969* Rs.	*1970* Rs.
Equity share capital	3,00,000	4,00,000	Goodwill	1,15,000	90,000
8% Redeemable preference share capital	1,50,000	1,00,000	Land and buildings	2,00,000	1,70,000
General reserve	40,000	70,000	Plant	80,000	2,00,000
Profit and loss A/c	30,000	48,000	Debtors	1,60,000	2,00,000
Proposed dividend	42,000	50,000	Stock	77,000	1,09,000
Creditors	55,000	83,000	Bills receivable	20,000	30,000
Bills payable	20,000	16,000	Cash in hand	15,000	10,000
Provision for taxation	40,000	50,000	Cash at bank	10,000	8,000
Rs.	6,77,000	8,17,000	Rs.	6,77,000	8,17,000

Additional information: (*i*) Depreciation of Rs. 10,000 and Rs. 20,000 has been charged on plant and land and buildings respectively in

1970, (*ii*) An interim dividend of Rs. 20,000 has been paid in 1970, (*iii*) Income-tax Rs. 35,000 has been paid during the year 1970.

(B. Com. (Hons.) Delhi 1972)

Solution

STATEMENT OF CHANGES IN WORKING CAPITAL

	1969	1970	Changes in current assets and current liabilities Dr.	Changes in current assets and current liabilities Cr.	Changes in non-current assets and non-current liabilities Dr.	Changes in non-current assets and non-current liabilities Cr.
Assets :						
Goodwill	1,15,000	90,000	—	—	—	25,000
Land and building	2,00,000	1,70,000	—	—	—	30,000
Plant	80,000	2,00,000	—	—	1,20,000	—
Debtors	1,60,000	2,00,000	40,000	—	—	—
Stock	77,000	1,09,000	32,000	—	—	—
Bills receivable	20,000	30,000	10,000	—	—	—
Cash in hand	15,000	10,000	—	5,000	—	—
Cash at bank	10,000	8,000	—	2,000	—	—
Rs.	6,77,000	8,17,000				
Liabilities :						
Equity shares	3,00,000	4,00,000	—	—	—	1,00,000
8% Redeemable preference shares	1,50,000	1,00,000	—	—	50,000	—
General reserve	40,000	70,000	—	—	—	30,000
Profit and loss account	30,000	48,000	—	—	—	18,000
Proposed dividend	42,000	50,000	—	—	—	8,000
Creditors	55,000	83,000	—	28,000	—	—
Bills payable	20,000	16,000	4,000	—	—	—
Provision for taxation	40,000	50,000	—	—	—	10,000
Rs.	6,77,000	8,17,000				
Net increase in working capital				51,000	51,000	
			86,000	86,000	2,21,000	2,21,000

STATEMENT OF SOURCES AND USES

		Rs.
Sources :		
Source from operation		2,18,000
Issue of equity share capital		1,00,000
Sale of building		10,000
Total sources		3,28,000
Applications :		
Purchase of plant	1,30,000	
Redemption of preference shares	50,000	

Payment of dividend :			
(*i*) Of previous year	42,000		
(*ii*) Interim dividend	20,000		
		62,000	
Payment of tax		35,000	
Total applications			2,77,000
Net increase in working capital		Rs.	51,000

Tutorial Notes

(1) BUILDING ACCOUNT

	Rs.		Rs.
To Opening balance	2,00,000	By Depreciation	20,000
		By Sale—balancing figure source	10,000
		By Closing balance	1,70,000
Rs.	2,00,000	Rs.	2,00,000

(2) PLANT ACCOUNT

	Rs.		Rs.
To Opening balance	80,000	By Depreciation	10,000
To *Purchases—balancing figure application of fund*	*1,30,000*	By Closing balance	2,00,000
Rs.	2,10,000	Rs.	2,10,000

(3) PROVISION FOR TAXATION ACCOUNT

	Rs.		Rs.
To *Cash—tax paid, application*	*35,000*	By Opening balance	40,000
To Closing balance	50,000	By Profit and loss account—balancing figure	45,000
Rs.	85,000	Rs.	85,000

(4) PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Goodwill (written off)	25,000	By Opening balance	30,000
To General reserve	30,000	By Source from operation—balancing figure	2,18,000
To Dividend proposed	50,000		
To Interim dividend	20,000		
To Depreciation—building	20,000		
To Depreciation—plant	10,000		
To Tax provision	45,000		
To Closing balance	48,000		
Rs.	2,48,000	Rs.	2,48,000

Illustration 38. Following are the summarised balance sheets of AMCO as on December 31, 1969 and 1970 :

Liabilities	*1969*	*1970*	*Assets*	*1969*	*1970*
Share capital	Rs 2,00,000	2,50,000	Land and building Rs.	2,00,000	1,90,000
General reserve	50,000	60,000	Machinery	1,50,000	1,69,000
Profit and loss	30,500	30,600	Stock	1,00,000	74,000
Bank loan (long-term)	70,000	—	Sundry debtors	80,000	64,200
Sundry creditors	1,50,000	1,35,200	Cash	500	600
Provision for taxation	30,000	35,000	Bank	—	8,000
			Goodwill	—	5,000
Rs	5,30,500	5,10,800	Rs.	5,30,500	5,10,800

Additional information supplied : During the year ended December, 31, 1970 : (*a*) Dividend of Rs. 23,000 was paid ; (*b*) Assets of another company were purchased for a consideration of Rs. 50,000 payable in shares. The following assets were purchased : stock Rs. 20,000, Machinery Rs. 25,000. (*c*) Machinery was further purchased for Rs. 8,000. (*d*) Depreciation written off machinery Rs. 12,000. (*e*) Income-tax provided during the year Rs. 33,000. (*f*) Loss on sale of machine Rs. 200 was written off to general reserve. You are required to prepare statement of funds flow.

(B. Com., Bombay, 1971, Modified)

Solution :

STATEMENT OF SOURCES AND USES

		Rs.
Sources :		
Source from operation		88,300
Issue of shares		20,000
Sale of machine		1,800
Total sources		1,10,100
Uses :		
Purchase of machine for cash	8,000	
Payment of bank loan	70,000	
Payment of tax	28,000	
Dividend paid	23,000	
Total uses		1,29,000
Net decrease in working capital	Rs.	18,900

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torial Notes

(1) SCHEDULE OF CHANGES IN WORKING CAPITAL

	1969	1970	*Changes in current assets and current liabilities* Dr.	Cr.	*Changes in non-current assets and non-current liabilities* Dr.	Cr
	Rs,	Rs.	Rs.	Rs.	Rs.	Rs.
Assets :						
Land and building	2,00,000	1,90,000	—	—	—	10,0
Machinery	1,50,000	1,69,000	—	—	19,000	—
Stock	1,00,000	74,000	—	26,000	—	—
Debtors	80,000	64,200	—	15,800	—	—
Cash	500	600	100	—	—	—
Bank	—	8,000	8,000	—	—	—
Goodwill	—	5,000	—	—	5,000	—
Rs.	5,30,500	5,10,800				
Liabilities :						
Share capital	2,00,000	2,50,000	—	—	—	50,000
General reserve	50,000	60,000	—	—	—	10,000
Profit and loss	30,500	30,600	—	—	—	100
Bank loan (long-term)	70,000	—	—	—	70,000	—
Sundry creditors	1,50,000	1,35,200	14,800	—	—	—
Provision for tax	30,000	35,000	—	—	—	5,000
Rs.	5,30,500	5,10,800				
Net decrease in working capital			18,900			18,90
Rs.			41,800	41,800	94,000	94,0

(2) LAND AND BUILDING ACCOUNT

To Opening balance	2,00,000	By Depreciation (balancing figure)	10,
		By Closing balance	1,90,
	Rs. 2,00,000		Rs. 2,00

(3) MACHINERY ACCOUNT

To Opening balance	1,50,000	By Depreciation	
To Share capital (purchase)	25,000	By General reserve (loss on sale)	
To Cash—purchase, application	8,000	By Cash—sales (source of fund—balancing figure)	1
		By Closing balance	
	Rs. 1,83,000		Rs.

(4) SHARE CAPITAL

To Closing balance	Rs 2,50,000	By Opening balance	Rs
		By Machinery purchase	
		By Stock—source	
		By Goodwill (balancing figure)	
	Rs. 2,50,000		R

(5) PROVISION FOR TAX ACCOUNTS

To *Income tax paid, Application (balancing figure)*	Rs. 28,000	By Opening balance	30,000
To Closing balance	35,000	By Profit and loss account	33,000
	Rs. 63,000		Rs. 63,000

(6) PROFIT AND LOSS ACCOUNT

To General reserve	Rs 10,200	By Opening balance	30,500
To Income-tax provision	33,000	By Source from operation (balancing figure)	88,300
To Depreciation :			
Building	10,000		
Machinery	12,000		
To Proposed dividend	23,000		
To Closing balance	30,600		
	Rs. 1,18,800		Rs. 1,18,800

(7) GENERAL RESERVE

To Machinery account (loss on sale)	200	By Opening balance	50,000
To Closing balance	60,000	By Profit and loss account (balancing figure)	10,200
	Rs. 60,200		Rs. 60,200

Illustration 39. The following is the summarised balance sheet of Atmaram & Co Ltd as on 1st January 1979.

BALANCE SHEET

Liabilities		Rs.	*Assets*		
Issued share capital 80,000 equity shares of Re. 1 each		80,000	Freehold property at cost		80,000
40,000 8% Redeemable preference shares of Re. 1 each		40,000	Plant and machinery less depreciation		50,000
Share premium		10,000	Furniture & fittings less depreciation		5,000
Revenue reserve	40,000		Investments (market value Rs. 32,000)		30,000
Profit & loss account	15,000	55,000	Stock	20,000	
Creditors	40,000		Debtors	45,000	65,000
Bank overdraft	5,000	45,000			
		Rs. 2,30,000			Rs. 2,30,000

On 31st December, 1979 the statement shown below was prepared when the debtors amounted Rs. 25,000, stock Rs 42,000 and creditors Rs. 45,000.

Sources and application of working capital.

Funds from operations :

Net operating profit for the year		19,000	
Add : Non-cash charges			
Depreciation on plant and machinery	10,000		
Depreciation on furniture & fittings	1,000	11,000	30,000

Other sources :

Sale of investments	32,000	

Sale of furniture and fittings	1,000	33,000
Total of sources		63,000
Applications:		
Redemption of preference shares	44,000	
Plant and Machinery purchased	3,000	
Dividend on equity shares	8,000	55,000
Increase in working capital at the end of the year		8,000

You are required to prepare the balance sheet at the end of the year in a similar form to that shown above.

Solution.

BALANCE SHEET
as on 31st December, 1979

Liabilities	Rs.	*Assets*		Rs.
Issued share capital 80,000 equity shares of Re. 1 each	80,000	Freehold property		80,000
Share premium	6,000	Plant and machinery	50,000	
Capital redemption reserve	40,000	*Add*: Purchases	3,000	
Profit and loss account	28,000		53,000	
Creditors	45,000	*Less*: Depreciation	10,000	43,000
		Furniture and fittings	5,000	
		Less: Sales	1,000	
			4,000	
		Less: Depreciation	1,000	3,000
		Investments		Nil
		Stock	12,000	
		Debtors	25,000	67,000
		Bank		6,000
Rs.	1,99,000		Rs.	1,99,000

Tutorial Notes

(1) Profit and loss account:

	Rs.
Balance as on 1-7-79	15,000
Add: Current operating profit	19,000
Add: Profit on sale of investments	2,000
	36,000
Less: Dividends paid	8,000
	28,000

(2) *Bank balance*:

Working capital as on 1-1-1979	20,000
Add: Increase in working capital as per statement	8,000
	28,000

Less : Working capital (other than bank balance as on 31-12-1979)	22,000
Bank balance	6,000
(3) Share premium account	10,000
Less : Premium on redemption of redeemable preference shares	4,000
	6,000

(4) Rs. 40,000 is transferred to capital redemption reserve as redemption is from out of profits.

Illustration 40. From the following data prepare a statement of sources and uses of funds :

December 31, (Rs. in '000)

	1971	1970		1971	1970
Accumulated depreciation	Rs 275	150	Cash	Rs 315	285
Creditors	100	75	Marketable securities	106	50
Bills payable	50	25	Debtors (net)	150	125
Debentures	500	250	Investments (long-term)	70	110
Equity capital	550	400	Inventories	95	70
Premium on shares	60	—	Machinery	500	350
Retained earnings	336	325	Buildings	600	200
			Land	35	35
	Rs. 1,871	1,225		Rs. 1,871	1,225

INCOME STATEMENT

Year ended December 31, 1971 (Rs. in '000)

Sales :		Rs. 600
Cost of goods sold		337
Gross margin on sales		263
Operating expenses :		
Depreciation—machinery	50	
—buildings	80	
Other expenses	100	
		230
Net margin from operations		33
Gain on sales of long-term investments		12
Total		45
Loss on sales of machinery (proceeds from sales Rs. 15,000)		5
Net income		Rs. 40

(M. Com., Delhi, :

Illustration 41. The following are the summarised balance sheets of Ashok Ltd, as on 31st December, 1977 and 31st December, 1978 :

Liabilities	*31st Dec., 1977* Rs.	*31st Dec., 1978* Rs.
Equity share capital of Rs. 10 each	4,00,000	4,80,000
Share premium account	—	20,000
General reserves	60,000	1,00,000
Profit and loss account	96,000	1,36,000
12% Debentures	1,00,000	—
Creditors	2,60,000	2,80,000
Proposed dividend	40,000	48,000
Total	Rs. 9,56,000	Rs. 10,64,000

Assets		Rs.		Rs.
Freehold land and building		2,10,000		2,80,000
Plant and machinery cost	5,80,000		6,40,000	
Less : Depreciation	2,80,000		3,00,000	
		3,00,000		3,40,000
Equipments cost	18,000		20,000	
Less : Depreciation	12,000		8,000	
		6,000		12,000
Inventories		2,60,000		2,10,000
Debtors		1,50,000		1,70,000
Cash		30,000		52,000
Total		Rs. 9,56,000		Rs. 10,64,000

Note (1) The plant and machinery which cost Rs. 40,000 and in respect of which Rs. 26,000 had been written off as depreciation was sold during the year 1978 for Rs. 6,000.

(2) Equipment which cost Rs. 10,000 and in respect of which Rs. 8,000 had been written off as depreciation was sold for Rs. 4,000 during 1978.

(3) The dividend which was declared in 1977 was paid during 1978.

You are required to prepare

(*a*) a statement showing the change in working capital during 1978.

(*b*) a statement showing the sources and application of working capital (Funds flow statement) during 1978.

[C.A. (Final), Fin. Management Nov., 1979]

Solution :

Ashok Limited

I. Schedule showing itemwise change in working capital for the year ending December 31, 1978 :

	31-12-1977	*31-12-1978*	*Change*	
Current assets	Rs.	Rs.	*Increase* Rs.	*Decrease* Rs.
Inventories	2,60,000	2,10,000		50,000
Debtors	1,50,000	1,70,000	20,000	
Cash	30,000	52,000	22,000	
Total	Rs. 4,40,000	Rs. 4,32,000		

Current liabilities				
Creditors	2,60,000	2,80,000		20,000
	Rs. 2,60,000	Rs. 2,80,000		
Working capital	1,80,000	1,52,000		
Net decrease in working capital		28,000	28,000	
	Rs. 1,80,000	1,80,000	70,000	70,000

II. Statement showing sources and application of funds :

Sources	Rs.	*Application*	Rs.
Equity share capital	[illegible]	[illegible]	1,00,000
Share premium	..		40,000
Sale of plant and machinery	..		
Sale of equipment	..		1,00,000
Funds from operations	..		12,000
Decrease in working capital	..		70,000
Rs.	3,22,000	Rs.	3,22,000

Tutorial Notes

(1) PROFIT AND LOSS ACCOUNT

	Rs		Rs.
To Proposed dividend	48,000	By Balance b/d	96,000
To General reserve	40,000	By Net Profit (balancing figure)	1,28,000
To Balance c/d	1,36,000		
Rs.	2,24,000	Rs.	2,24,000

(2) *Funds generated by operations* :

		Rs.
Net profit as shown above		1,28,000
Add : Non-cash charges—Depreciation		
Plant and machinery	46,000	
Equipment	4,000	
		50,000
Loss on sale of plant		8,000
		1,86,000
Less : Profit on sale of equipment		2,000
	Rs.	1,84,000

(3) PROVISION FOR DEPRECIATION ON PLANT AND MACHINERY ACCOUNT

	Rs		Rs.
To machinery sold account	26,000	By Balance b/d (opening)	2,80,000
To Balance c/d (closing)	3,00,000	By Profit and loss account (balancing figure)	46,000
Rs.	3,26,000	Rs.	3,26,000

(4) PROVISION FOR DEPRECIATION ON EQUIPMENT ACCOUNT

	Rs.		Rs.
To Equipment sold account	8,000	By Balance b/d	12,000
To Balance c/d	8,000	By Profit and loss account (balancing figure)	4,000
Rs.	16,000	Rs.	16,000

(5) PLANT AND MACHINERY ACCOUNT

	Rs.		Rs.
To Balance b/d	5,80,000	By Machinery sold account	40,000
To Purchases (balancing (figure)	1,00,000	By Balance c/d	6,40,000
Rs.	6,80,000	Rs.	6,80,000

(6) EQUIPMENT ACCOUNT

	Rs.		Rs.
To Balance b/d	18,000	By Equipment sold account	10,000
To Puschases (balancing figure)	12,000	By Balance c/d	20,000
Rs.	30,000	Rs.	30,000

(7) MACHINERY DISPOSAL ACCOUNT

	Rs.		Rs.
To plant and machinery account	40,000	By Depreciation	26,000
		By Cash—sales	6,000
		By Profit and loss account (loss)	8,000
Rs.	40,000	Rs.	40,000

(8) EQUIPMENT DISPOSAL ACCOUNT

	Rs.		Rs.
To Equipment account	10,000	By Depreciation	8,000
To Profit and loss account (profit)	2,000	By Cash—sales	4,000
Rs.	12,000	Rs.	12,000

Illustration 42. From the figures given below, prepare a statement showing the changes in the working capital and fund flow statement during the year 1977 :

	Dec. 31, 1976	*Dec. 31, 1977*
Assets :	Rs.	Rs.
Fixed assets (net)	5,10,000	6,20,000
Investments	30,000	80,000
Current assets	2,40,000	3,75,000
Discounts on debenture	10,000	5,000
	7,90,000	10,80,000
Liabilities and capital :		
Equity share capital	3,00,000	3,50,000
Preference share capital	2,00,000	1,00,000
Debentures	1,00,000	2,00,000
Reserves	1,10,000	2,70,000

Provision for doubtful debts	10,000	15,000
Current liabilities	70,000	1,45,000
	Rs. 7,90,000	Rs. 10,80,000

You are informed that during the year :

(*i*) A machine costing Rs. 70,000, book value Rs. 40,000 was disposed of for Rs. 25,000 ;

(*ii*) Preference share redemption was carried out at a premium of 5% ; and

(*iii*) Dividend at 15% was paid on equity shares for the year 1976.

Further :

(*a*) The provision for depreciation stood at Rs. 1,50,000 on 31-12-1976 and at Rs. 1,90,000 on 31-12-1977 ; and

(*b*) Stock which was valued at Rs. 90,000 as on 31-12-1976 was written up to its cost, Rs. 1,00,000 for preparing profit and loss account for the year 1977. (M. Com. Nagpur April 1978)

Solution.

(I) Statement showing the changes in working capital for the year ending December 31, 1977

Current assets	*31-12-1976*	*31-12-1978*	*Change Increase*	*Decrease*
Current assets	Rs. 2,40,000	3,75,000	1,35,000	
	Rs. 2,40,000	3,75,000		
Current liabilities	70,000	1,45,000		75,000
	Rs. 70,000	1,45,000		
Working capital	1,70,000	2,30,000		
Net increase in working capital	60,000			60,000
	Rs. 2,30,000	2,30,000	1,35,000	1,35,000

(II) Statement showing funds from operations

Increase in reserves		Rs. 1,50,000 (1)
Add :	Depreciation	70,000 (2)
,,	Discount written off	5,000
,,	Increase in the provision for bad debts	5,000
,,	Premium on redemption of debentures written off	5,000
,,	Dividends paid	45,000
,,	Loss on sale of machinery	15,000
,,	Overvaluation of opening stock	10,000 (3)
	Total	Rs. 3,

(III) Funds-flow statement.

Sources	Rs.	Uses	Rs.
Cash in flow from operations	3,05,000	Purchase of fixed assets	2,20,000 (4)
Issue of share capital	50,000	Purchase of investments	50,000
Issue of debentures	1,00,000	Redemption of preference shares	1,00,000
Sale of assets	25,000	Premium thereon	5,000
		Dividends paid	45,000
		Increase in working capital	60,000
	Rs. 4,80,000		Rs. 4,80,000

Tutorial Notes

(1) The following entry is to be made for increasing the value of opening stock.

Stock account	Dr.	10,000	
To Reserve			10,000

∴ increase in the reserve (Rs. 2,70,000—Rs. 1,20,000=Rs. 1,50,000.

(2) PROVISION FOR DEPRECIATION ACCOUNT

	Rs.		Rs.
To Assets written back (70,000—40,000)	30,000	By Balance (31-12-1976)	1,50,000
To Balance (31-12-1977)	1,90,000	By Profit and loss account —balancing figure	70,000
	Rs. 2,20,000		Rs. 2,20,000

(3) Since the increase in the value of opening stock is only a book adjustment, the actual funds from operations will be more by Rs. 10,000.

(4) FIXED ASSETS ACCOUNT

	Rs.		Rs.
To Balance (31-12-1976)	6,60,000	By Provision for depreciation	30,000
To Purchases (balancing figure)	2,20,000	By Cash	25,000
		By Loss on sale	15,000
		By Balance (31-12-1977)	8,10,000
	Rs. 8,80,000		Rs. 8,80,000

Illustration 43. Below is given the Balance Sheet of Chhatrak and Company Limited as at 31st March, 1979 and its estimated profit and loss account for the year ending 31st March, 1980.

BALANCE SHEET

as at 31st March, 1979

Liabilities	Rs.	Assets	Rs.
Share capital (Rs. 100) 7% Redeemable preference shares	3,50,000	Production plant and equipments	13,60,000
Equity shares	6,00,000	*Less* : Depreciation	3,10,000
Share premium	80,000		10,50,000
General reserve	1,80,000	Goodwill	1,50,000
6% Debentures	2,50,000	Patents	60,000
Creditors for goods	1,60,000	Stock	2,80,000
Outstanding expenses	40,000	Book debts	2,80,000
Provision for taxation	1,75,000	Cash at bank	85,000
Proposed dividend (equity)	90,000	Underwriting commission	20,000
	Rs. 19,25,000		Rs. 19,25,000

ESTIMATED PROFIT AND LOSS ACCOUNT (1979-80)

Opening stock	Rs 2,80,000	Sales :		Rs.
Purchases	16,80,000	Cash	4,60,000	
Wages	1,00,000	Credit	23,40,000	
Manufacturing expenses	1,50,000			28,00,000
Depreciation	1,80,000	Stock		2,70,000
Selling and distribution expenses	1,30,000	Miscellaneous income		25,000
Office and administrative expenses	1,10,000	Profit on sale of machinery		4,500
Interest	25,000			
Goodwill written off	30,000			
Patents written off	15,000			
Provision for taxation	1,90,000			
Preference dividend	24,500			
Proposed dividend	90,000			
Balance of profit	95,000			
	Rs. 30,99,500			Rs. 30,99,500

Additional information :

(*a*) Both preference shares and debentures are due for redemption on 31st March, 1980. Half the debentureholders in value with accept new 9% redeemable preference shares. The company also proposes to issue equity capital with a nominal value of Rs. 2,00,000 at a premium of 10%.

(*b*) There will be addition to fixed assets for Rs. 1,80,000. The cost of assets to be sold in the year 1979-80 is Rs. 75,000 (accumulated depreciation thereon Rs. 38,000).

(*c*) Tax liability up to 31-3-1979 will be settled for Rs 1,70,000.

(*d*) Book debts on 31st March, 1980 are to be taken at 10% more than as warranted by the period of $1\frac{1}{2}$ months.

(*e*) Creditors for goods will continue to extend one month credit. Outstanding and prepaid expenses on 31st March, 1980 will be Rs. 30,000 and Rs. 4,000 respectively.

You are required to prepare a projected fund flow statement for the year ending 31st March, 1980. [C.A. Final (New) Nov. 1979]

Solution.

(1) Cash inflow from operations in this case will be as follows :

Net profit as per books		Rs. 95,000
Add : Proposed dividend		
Equity	90,000	
Preference	24,500	
		1,14,500
Amounts written off		
Goodwill	30,000	
Patents	15,000	
		45,000
Depreciation		

Tax saving (being the difference between the provision and actual tax)	5,000
	4,39,500
Less : Profit on sale of machinery	4,500
	Rs. 4,35,000

(2) PROJECTED BALANCE SHEET OF CHHATRAK & CO LTD

as on 31st March 1980

Liabilities		Rs.	*Assets*		Rs.
Share capital :			Fixed assets :		
8,000 equity shares of Rs. 100 each		8,00,000	Goodwill		1,20,000
9% Redeemable preference share capital		1,25,000	Production plant and equipment	13,60,000	
Reserves and Surplus :			*Less* : Sale during the year	75,000	
Share premium account		1,00,000		12,85,000	
Capital redemption reserve		1,50,000	*Add* : Additions during the year	1,80,000	
General reserve		30,000		14,65,000	
Profit and loss a/c	95,000		*Less* : Provision for depreciation	4,52,000	10,13,000
Add : Tax saving	5,000	1,00,000	Patents		45,000
Secured loans		—	Investments		—
Unsecured loans		—	Current assets—loans and advances :		
Current liabilities and provisions :			A. Current assets :		
A. Current liabilities—Sundry creditors		1,40,000	Stock-in-trade		2,70,000
Outstanding expenses		30,000	Sundry debtors		3,21,750
Bank overdraft		38,750	B. Loans and advances prepaid expenses		4,000
B. Provisions			Miscellaneous expenditure :		
Provision for taxation		1,90,000	Underwriting commission		20,000
Proposed equity dividend		90,000			
	Rs.	17,93,750		Rs.	17,93,750

(3. STATEMENT SHOWING SOURCES AND APPLICATION OF FUNDS

Cash in flow from operations	Rs. 4,35,000	Purchase of fixed assets	Rs. 1,80,000
Issue of preference shares	1,25,000	Redemption of debentures	2,50,000
Issue of equity shares	2,20,000	Redemption of preference shares	3,50,000
Sale of machinery	41,500	Preference dividend	24,500
Decrease in working capital	73,000	Equity dividend	90,000
	Rs. 8,94,500		Rs. 8,94,500

(4) Statement shawing changes in working capital.

Current assets :	31-3-1979	31-3-1980
Stock	Rs. 2,80,000	Rs. 2,70,000
Book debts	2,80,000	3,21,750
Prepaid expenses	—	4,000
Cash	85,000	—
	6,45,000	5,95,750

Less : Current liabilities				
Creditors	1,60,000		1,40,000	
Outstanding expenses	40,000		30,000	
Bank overdraft			38,750	
Provision for taxation	1,75,000		1,90,000	
		3,75,000		3,98,750
		2,70,000		1,97,000
Decrease in working capital				73,000
		2,70,000		2,70,000

Working Notes :

(1) Cash at Bank as on 31st March 1979 Rs. 85,000

Add : Profit and non cash charges [illegible] operating profit		
[illegible]		4,30,000
[illegible]		1,90,000
[illegible]		41,500
[illegible]		2,20,000
Decrease in stock-in-trade		10,000
		9,76,500
Less : Payments		
Purchase of fixed assets	Rs. 1,80,000	
Increase in debtors	41,750	
Decrease in outstanding expenses	10,000	
Decrease in creditors	20,000	
Prepaid expenses	4,000	
Redemption of preference shares	3,50,000	
Redemption of debentures	1,25,000	
Income-tax paid (1978-79)	1,70,000	
Preference dividend (1979-80)	24,500	
Equity dividend (1978-79)	90,000	
		10,15,250
Resultant Bank overdraft		38,750

Illustration 44. The following is the audited Balance Sheet of Sri Ram Chandra as on 31st March, 1976 :

Liabilities	Rs	*Assets*	Rs.
Capital account	1,62,000	Machineries	40,000
Sundry creditors for goods	30,000	Furniture	10,000
		Stock	35,000
		Debtors	90,000
		Cash on hand	6,000
		Cash at bank	11,000
	Rs. 1,92,000		Rs. 1,92,000

A fire occurred in the evening of *31st March, 1977*, destroying the books of accounts and records. The cashier absconded with [illegible] cash in the Cash Box.

The trader gives the following information :

(1) Sales are effected as 20% for cash and the balance on credit. His total sales, for the year ended March 31, 1977, were 20% higher than the previous year. All sales and purchases of goods were evenly spread throughout the year (as also in the last year).

(2) Terms of credit { Debtors 2 months; Creditors 1 month.

(3) Stock level was maintained at Rs. 35,000 all through the year.

(4) A steady Gross Profit rate of $33\frac{1}{3}\%$ on turnover was maintained throughout. Creditors are paid by cheques only. There is no cash purchase.

(5) His private records and the Bank Pass Book kept with him disclosed the following transactions for the year :

(*i*)	Miscellaneous business expenses (of which Rs. 5,000 was outstanding as on March 31, 1977)	Rs. 1,80,000 (including Rs. 35,000 paid by cheque)
(*ii*)	Repairs	Rs. 2,500 (paid by cash)
(*iii*)	Addition to machineries ...	Rs. 50,000 (paid by cheque)
(*iv*)	Private drawings	Rs. 36,000 (paid by cash)
(*v*)	Travelling expenses	Rs. 12,000 (paid by cash)

(6) Collections from debtors (including Rs. 30,000 for cash) and payments to creditors were prompt all along.

(7) Depreciation is to be provided on machinery @ 10% of the closing book value.

(8) The cash stolen is to be charged to the Profit and Loss Account.

Prepare a statement of source and application of funds for the year ended 31st March, 1977. [C.A. Final (New) Nov., 1977]

Solution.

(1) PROFIT AND LOSS ACCOUNT
for the year ending 31-3-1977

		Rs.			Rs.
To Opening stock		35,000	By Sales		8,10,000[1]
To Purchases		5,40,000[2]	(Cash	1,62,000	
To Gross profit c/d		2,70,000	Credit	6,48,000)	
			By Stock		35,000
		Rs. 8,45,000			Rs. 8,45,000
To Expenses paid	1,75,000		By Gross profit b/d		2,70,000
Add : Outstanding	5,000				
		1,80,000			
To Depreciation		9,000			
To Repairs		2,500			
To Travelling expenses		12,000			
To Cash stolen		7,500			
To Net profit		59,000			
		Rs. 2,70,000			Rs. 2,70,000

(II) CASH BOOK

	Cash	*Bank*		*Cash*	*Bank*
To Opening balance	6,000	11,000	By Sundry creditors —payments		Rs. 5,25,000
To Sundry debtors —*Collection*	*30,000*	*6,00,000*	*By Miscellaneous* expenses	1,40,000	35,000
To Sales—Cash	1,62,000		By Repairs	2,500	
			By Addition to machinery		50,000
			By Travelling expenses	12,000	
			By Private drawings	36,000	
			By Balance c/d	7,500*	1,000
	Rs. 1,98,000	6,11,000		Rs. 1,98,000	6,11,000

Since the cashier absconded with the available cash in the cash box, cash stolen is Rs. 7,500.

(III) Schedule of itemwise changes in the working capital.

	31st March 1976	*31st March 1977*	*Increase*	*Decrease*
Current assets	Rs	Rs	Rs.	Rs.
Stock-in-trade	35,000	35,000	—	—
Sundry debtors	90,000	1,08,000	18,000	—
Cash in hand	*6,000*	—	—	6,000
Cash at bank	11,000	1,000		10,000
	1,42,000	1,44,000		
Current liabilities :				
Sundry trade creditors	30,000	45,000		15,000
Expense creditors	—	5,000		5,000
	30,000	50,000		
			18,000	36,000
Decrease in working capital			18,000	
			36,000	36,000

(IV) Statement showing the changes in F[illegible]al Position for th[illegible] year ending 31st March, 1977.

Sources	Rs.	*U*[illegible]	R[illegible]
Funds from operations*	68,000	Purchase of [illegible]	50,0[illegible]
Decrease in working capital	18,000	Drawings	36,0[illegible]
	Rs. 86,000		Rs. 86,0[illegible]

* Net profit as per profit and loss accoun[illegible]	59,0[illegible]
Add : Depreciation	9,0[illegible]
Funds from operations	Rs. 6[illegible]

The trader gives the following information :

(1) Sales are effected as 20% for cash and the balance on credit. His total sales, for the year ended March 31, 1977, were 20% higher than the previous year. All sales and purchases of goods were evenly spread throughout the year (as also in the last year).

(2) Terms of credit } Debtors 2 months; Creditors 1 month.

(3) Stock level was maintained at Rs. 35,000 all through the year.

(4) A steady Gross Profit rate of $33\frac{1}{3}\%$ on turnover was maintained throughout. Creditors are paid by cheques only. There is no cash purchase.

(5) His private records and the Bank Pass Book kept with him disclosed the following transactions for the year :

(*i*) Miscellaneous business expenses (of which Rs. 5,000 was outstanding as on March 31, 1977) ... ... Rs. 1,80,000 (including Rs. 35,000 paid by cheque)

(*ii*) Repairs ... ... Rs. 2,500 (paid by cash)

(*iii*) Addition to machineries ... Rs. 50,000 (paid by cheque)

(*iv*) Private drawings ... ... Rs. 36,000 (paid by cash)

(*v*) Travelling expenses ... ... Rs. 12,000 (paid by cash)

(6) Collections from debtors (including Rs. 30,000 for cash) and payments to creditors were prompt all along.

(7) Depreciation is to be provided on machinery @ 10% of the closing book value.

(8) The cash stolen is to be charged to the Profit and Loss Account.

Prepare a statement of source and application of funds for the year ended 31st March, 1977. [C.A. Final (New) Nov., 1977]

Solution.

(1) PROFIT AND LOSS ACCOUNT

for the year ending 31-3-1977

To Opening stock		Rs. 35,000	By Sales		Rs. 8,10,000[1]
To Purchases		5,40,000[2]	(Cash	1,62,000	
To Gross profit c/d		2,70,000	Credit	6,48,000)	
			By Stock		35,000
		Rs. 8,45,000			Rs. 8,45,000
To Expenses paid	1,75,000	Rs.	By Gross profit b/d		Rs. 2,70,000
Add : Outstanding	5,000				
		1,80,000			
To Depreciation		9,000			
To Repairs		2,500			
To Travelling expenses		12,000			
To Cash stolen		7,500			
To Net profit		59,000			
		Rs. 2,70,000			Rs. 2,70,000

(II) CASH BOOK

	Cash	Bank		Cash	Bank
To Opening balance	6,000	11,000	By Sundry creditors —payments		Rs. 5,25,000
To Sundry debtors —Collection	30,000	6,00,000	By Miscellaneous expenses	1,40,000	35,000
To Sales—Cash	1,62,000		By Repairs	2,500	
			By Addition to machinery		50,000
			By Travelling expenses	12,000	
			By Private drawings	36,000	
			By Balance c/d	7,500*	1,000
	Rs. 1,98,000	6,11,000		Rs. 1,98,000	6,11,000

Since the cashier absconded with the available cash in the cash box, cash stolen is Rs. 7,500.

(III) Schedule of itemwise changes in the working capital.

	31st March 1976	*31st March 1977*	*Increase*	*Decrease*
Current assets	Rs.	Rs	Rs	Rs
Stock-in-trade	35,000	35,000	—	—
Sundry debtors	90,000	1,08,000	18,000	—
Cash in hand	6,000	—	—	6,000
Cash at bank	11,000	1,000		10,000
	1,42,000	1,44,000		
Current liabilities :				
Sundry trade creditors	30,000	45,000		15,000
Expense creditors	—	5,000		5,000
	30,000	50,000		
			18,000	36,000
Decrease in working capital			18,000	
			36,000	36,000

(IV) Statement showing the changes in Financial Position for the year ending 31st March, 1977.

Sources	Rs	*Uses*	Rs
Funds from operations*	68,000	Purchase of machinery	50,000
Decrease in working capital	18,000	Drawings	36,000
	Rs. 86,000		Rs. 86,000

* Net profit as per profit and loss account 59,000
Add : Depreciation 9,000

Funds from operations R

Tutorial Notes :

(1) **Sales for the year 1976-1977 :**
Sales during 1975-76
Book debts being equal to 2 months sale

Credit sales works out to $\frac{90,000}{2} \times 12$	5,40,000
Cash sales (cash to credit sales ratio is 1 : 4)	1,35,000
Total sales	6,75,000
Increase of 1976-77 over 1975-76 is 20%	1,35,000
Total sales for 1976-1977	8,10,000
Cash sales (1/5)	1,62,000
Credit sales (4/5)	6,48,000
	Rs. 8,10,000

(2) Purchases for the year 1976-77

Sales	8,10,000
Less : Gross profit @ $33\frac{1}{3}\%$	2,70,000
Cost of goods sold	5,40,000

Purchases = Cost of goods sold + Closing stock − opening stock.
Since there is no change in stock levels purchases would be Rs. 5,40,000

(3) TOTAL DEBTORS ACCOUNT

To Balance b/d	Rs. 90,000	By Cash (balancing figure)	Rs. 6,30,000
To Sales—credit	6,48,000	By Balance c/d	1,08,000*
	Rs. 7,38,000		Rs. 7,38,000

* Equal to 2 months' credit sales $= \frac{6,48,000}{12} \times 2 = 1,08,000$.

(4) TOTAL CREDITORS ACCOUNT

To Cash (balancing figure)	Rs. 5,25,000	By balance b/d	Rs. 30,000
To Balance c/d	45,000*	By Purchases	5,40,000
	Rs. 5,70,000		Rs. 5,70,000

* Equal to one month's credit sales $\frac{5,40,000}{12} \times 1 = 45,000$

Illustration 45. From the following balance of a wholly owned subsidiary prepare a statement of sources and application of funds and a schedule of changes in working capital (with the column for changes in other assets) :

Liabilities	*Jan. 1*	*Dec. 31*	*Assets*	*Jan. 1*	*Dec. 31*
Current liabilities Rs.	2,00,000	2,50,000	Current assets Rs	4,00,000	5,01,000
Capital surplus	3,00,000	—	Fixed assets, *less* provision	10,00,000	10,16,000
Earned surplus	7,00,000	—	Deferred charges	50,000	40,000
Equity capital	8,00,000	—	Goodwill	6,50,000	60,000
Inter-company a/c	1,00,000	13,67,000			
Rs.	21,00,000	16,17,000	Rs.	21,00,000	16,17,000

On March 31, Rs. 6,00,000 of goodwill was charged off Rs. 3,00,000 to capital surplus and Rs. 3,00,000 to earned surplus.

In the first half of the year the subsidiary bought the assets of a business, consisting of some fixed assets and goodwill and Rs. 50,000 for inventory and accounts receivable. The amount paid was Rs. 1,70,000.

Old machinery was sold for Rs. 1,000 ; it had a book value of Rs. 12,000 and Rs. 8,000 depreciation had been provided.

On June 30, the subsidiary company was dissolved and made a division of the parent company. Its accounts continued in a separate divisional ledger.

A net profit of Rs. 3,17,000, after providing Rs. 80,000 for depreciation and Rs. 10,000 for amortization of goodwill, had been made and was credited to inter-company account. The deferred charges consist of unexpired insurance and prepaid current expenses.

(Adapted from I.C.A. Examination)

Solution.

STATEMENT OF SOURCES AND USES

Sources	Rs	*Uses*	Rs
Profits from operation	4,20,000	Purchase of fixed assets	1,00,000
Sale of plant	1,000	Purchase of goodwill	20,000
Loan from holding company	9,50,000	Payment of dividend	4,00 000
		Payment of capital	8,00,000
			13,20,000
		Increase in working capital	51,000
Rs.	13,71,000	Rs	13,71,000

SCHEDULE OF CHANGES IN WORKING CAPITAL

	Jan. 1	*Dec. 31*	*Change in working capital*		*Change in other assets*	
			Dr.	*Cr.*	*Dr.*	*Cr.*
Assets						
Current assets Rs.	4,00,000	5,01,000	1,01,000	—	—	—
Fixed assets *less* prov.	10,00,000	10,16,000	—	—	16,000	—
Deferred charges	50 000	40,000	—	—	—	10 000
Goodwill	6,50,000	60,000	—	—	—	5,90,000
Rs.	21,00,000	16,17,000				

Liabilities				—		
Current liabilities	2,00,000	2,50,000	—	50,000	—	—
Capital surplus	3,00,000	—	—	—	3,00,000	—
Earned surplus	7,00,000	—	—	—	7,00,000	—
Equity capital	8,00,000	—	—	—	8,00,000	—
Inter-company account	1,00,000	13,67,000	—		—	12,67,000
Rs.	21,00,000	16,17,000				
Increase in working capital			—	51,000	51,000	—
Rs.			1,01,000	1,01,000	18,67,000	18,67,000

Tutorial Notes

(1) GOODWILL ACCOUNT

To Opening balance	6,50,000	By Earned surplus	3,00,000
To Bank	20,000	By Capital surplus	3,00,000
		By Profit and loss account	10,000
		By Closing balance	60,000
	6,70,000		6,70,000

(2) MACHINERY DISPOSAL ACCOUNT

To Fixed assets—(Cost *less* depreciation)	4,000	By Bank	1,000
		By Profit and loss account	3,000
	4,000		4,000

(3) INTER-COMPANY ACCOUNT

To Closing balance	13,67,000	By Opening balance	1,00,000
		By Profit and loss account	3,17,000
		By Increase in inter-company account further loans	9,50,000
	13,67,000		13,67,000

(4) DEFERRED CHARGES ACCOUNT

To Opening balance	50,000	By Profit and loss account	10,000
		By Closing balance	40,000
	50,000		50,000

(5) EARNED SURPLUS ACCOUNT

To Goodwill	3,00,000	By Opening balance	7,00,000
To Bank	4,00,000		
To Closing balance	Nil		
	7,00,000		7,00,000

(6) PROFIT AND LOSS STATEMENT

Profit made during the year credited to inter-company account	Rs. 3,17,000
Add Depreciation written off	80,000
Goodwill written off	10,000
Loss on sale of equipment	3,000
Deferred charges written off	10,000
	Rs. 4,20,000

(7) FIXED ASSET ACCOUNT

To Opening balance	10,00,000	By Equipment sold account	4,000
To Purchases	1,00,000	By Depreciation	80,000
		By Closing balance	10,16,000
	11,00,000		11,00,000

Assumptions :

1. Any excess over the opening balance of inter-company account, leaving the amount of profit credited to this account, has been assumed to be loans taken from the parent company. Hence, it is a source of fund.

2. The unaccounted amount of Rs. 4,00,000 in the earned surplus account, after writing off goodwill, is assumed to have been utilised in paying off dividend to parent company after dissolution. Hence application of fund.

3. Absence of equity capital at the end of year hints at the payment of capital on dissolution This is an application of fund.

Illustration 46. The following are the summarised balance sheets of *A* Limited as on 31st December :

	1973	1974		1973	1974
6% Preference shares—redeemable 1970/76 at 10% premium	Rs. 1,00,000	80,000	Fixed assets : At cost	Rs. 2,40,070	2,53,730
Ordinary shares	75,000	1,20,000	Depreciation provided	90,020	98,480
Plant replacement reserve	15,000	10,000		1,50,050	1,55,250
Profit and loss account	1,00,350	1,02,700	Subsidiary company Shares at cost	61,000	76,000
6% Debentures	—	40,000	Stock	98,000	1,04,000
Bank loan	22,000	—	Debtors	88,000	85,000
Creditors accruals	84,450	75,550	Cash	11,750	32,000
Proposed ordinary dividends	12,000	24,000			
	Rs. 4,08,800	4,52,250		Rs. 4,08,800	4,52,250

You ascertain that during 1974 :

(*a*) Rs. 25,000 part of [illegible] on profit and loss [illegible] 0·25 per share on [illegible]

(*b*) On 31st December 20,000 preference shares were redeemed at the specified premium out of the proceeds of a right issue of 20,000 new ordinary shares issued for cash at Re. 1 per share. The premium was written off to profit and loss account.

(*c*) The movement on plant replacement reserve represents a [illegible] to profit and loss account.

(*d*) The ordinary dividend for the year 1973 was paid in addition to interim dividend on the ordinary shares thus absorbing Rs. 4,000. The preference dividend was paid on 31st December in each year.

(*e*) In regard to fixed assets—(*i*) Rs. 3,000 was added to the book value of a property, following a revaluation, and credited to profit and loss account, (*ii*) expenditure totalling Rs. 1,700 which, at 31st December, 1973, had been carried forward in suspense (included in "debtors") was transferred to fixed assets, (*iii*) depreciation of fixed assets of Rs. 13,260 was charged to profit and loss account, and (*iv*) plant (cost Rs. 6,000, depreciation provided Rs. 4,800) was sold for Rs. 250 and the loss written off to profit and loss account.

(*f*) The increase in the investment in the subsidiary company represents the cost of additional shares purchased during the year.

You are required to prepare a statement showing the sources and applications of fund during the year.

Solution :

STATEMENT OF SOURCES AND USES

For the year ended December 31, 1974

Sources :			
Funds from operation			Rs. 68,360
Issue of shares			20,000
Issue of debentures			40,000
Sale of fixed assets			250
Total sources			Rs. 1,28,610
Applications			
Redemption of preference shares (including premium)		22,000	
Repayment of bank loan		22,000	
Purchase of fixed assets		14,960	
Purchase of shares in subsidiary company		15,000	
Dividends :			
1973, Final—Ordinary shares	12,000		
1974, Interim - Ordinary shares	4,000		
1974, Preference shares, 6% on Rs. 80,000	4,800		
		20,800	
Total applications			94,760
Net increase in working capital			Rs. 33,850

SCHEDULE OF CHANGE IN WORKING CAPITAL

	1973	1974	*Current assets and current liabilities*		*Non-current assets and Non-current liabilities*	
			Dr.	*Cr.*	*Dr.*	*Cr.*
Assets	Rs.	Rs	Rs.	Rs.	Rs	Rs.
Fixed assets	2,40,070	2,53,730	—	—	13,660	—
Shares at cost	61,000	76,000	—	—	15,000	—
Stock	98,000	1,04 000	6,000	—	—	—
Debtors	86,300	85,000	—	1,300	—	—
Cash	11,750	32,000	20,250	—	—	—
Expenditure	1,700	—	—	—	—	1,700
	4,98,820	5,50,730				
Liabilities						
R. Preference shares	1,00,000	80,000	—	—	20,000	—
Ordinary shares	75,000	1,20,000	—	—	—	45,000
Plant replacement reserve	15,000	10,000	—	—	5,000	—
Profit and loss account	1,00,350	1,02,700	—	—	—	2,350
6% Debentures	—	40,000	—	—	—	40,000
Bank loan (long-term)	22,000	—	—	—	22,000	—
Creditors' accruals	84,450	75,550	8,900	—	—	—
Proposed ordinary dividend	12,000	24,000	—	—	—	12,000
Depreciation on fixed assets	90,020	98,480	—	—	—	8,460
	4,98,820	5,50,730				
Net increase in working capital				33,850	33,850	
			35,150	35,150	1,09,510	1,09,510

TUTORIAL NOTES

(1) FIXED ASSETS ACCOUNT (At cost)

To Opening balance	2,40,070	By Plant sold account	6,000
To Expenditure (expenses capitalised)	1,700	By Closing balance	2,53,730
To Profit and loss account (profit on revaluation)	3,000		
To Purchase (application—balancing figure)	14,960		
	2,59,730		2,59,730

(2) PLANT DISPOSAL ACCOUNT

To Fixed assets account	6,000	By Depreciation account	[illegible]
		By Cash—sale of plant	[illegible]
		By Profit and loss account —Loss on sale	[illegible]
	6,000		[illegible]

(3) DEPRECIATION ACCOUNT

To Plant sold account	4,800	By Opening balance	90,020
To Closing balance	98,480	By Profit and loss account (balancing figure)	13,260
	1,03,280		1,03,280

(4) PROFIT AND LOSS ACCOUNT

		Rs.		Rs.
To Depreciation		13,260	By Opening balance	1,00,350
To Loss on sale of plant		950	By Plant replacement reserve	5,000
To Preference dividend, 6% on Rs. 80,000		4,800	By Fixed assets (profit on revaluation)	3,000
To Ordinary dividend			By Fund from operation (balancing figure)	68,360
Interim	4,000			
Final	24,000			
		28,000		
To Premium on redemption of preference shares		2,000		
To Ordinary share capital account—capitalisation		25,000		
To Closing Balance		1,02,700		
		Rs. 1,76,710		Rs. 1,76,710

*Illustration 47. The following schedule shows the blance sheet accounts at the beginning and end of the year—

Debits	*Dec. 31 1974* Rs.	*Dec. 31 1973* Rs.	*Increase or (decrease)* Rs.
Cash	2,82,400	3,20,000	(37,600)
Accounts receivable	4,90,000	4,10,000	80,000
Inventory	6,95,000	6,60,000	35,000
Prepaid expenses	10,000	8,000	2,000
Inventory in subsidiary company	1,06,000	—	1,06,000
Cash surrender value of life insurance policy	2,100	1,800	300
Machinery	1.86,600	1,90,000	(3,400)
Buildings	5,66,500	5,07,500	59,000
Land	52,500	52,500	—
Patents	71,000	60,000	11,000
Gooodwill	40,000	50,000	(10,000)
Bond discount and expense	4,680	—	4.680
	Rs. 25,06,780	22,59,800	2.46,980
Credits			
Accrued taxes payable	92,000	80,000	12 000
Accounts payable	3.01.280	2,80,000	21.280
Dividends payable	60,000	—	60,000
Bonds payable 4%	1,25,000	—	1.25,000
Bonds payable 6%	—	1,00,000	(1,00,000)

Allowance for bad debts	45,300	40,000	5,300
Accumulated depreciation – buildings	4,07,000	4,00,000	7,000
Accumulated depreciation —machinery	1,41,000	1,30,000	11,000
Premium on bonds payable	—	1,600	(1,600)
Capital stock—no par	13,01,200	14,53,200	(1,52,000)
Paid-up capital	14,000	—	14,000
Reserve for plant expansion	10,000	—	10,000
Retained earnings	10,000	(2,25,000)	2,35,000
	Rs. 25,06,780	22,59,800	2,46,980

The statement of retained earnings is as follows :

		Rs.
Dec. 31, 1973 Balance (deficit)		(2,25,000)
Mar. 31, 1974 Profit for first quarter of 1974		25,000
Apr. 1, 1974 Transfer from capital surplus		2,00,000
Balance	Rs.	Nil
Dec. 31, 1974 Profit for last three quarters of 1974		80,000
Dividends declared, payable on January 20, 1975		(60,000)
Reserve for plant expansion		(10,000)
Balance	Rs.	10,000

Additional information : (1) On April 1, 1974, the existing deficit was written off against capital surplus created by reducing the stated value of the no-par stock. (2) On November 1, 1974, 8,000 shares of no-par stock were sold for Rs. 62,000. The board of directors voted to regard Rs. 6·00 per share as stated capital (3) A patent was purchased for Rs. 16,000. (4) Machinery was purchased for Rs 4,600 and installed in December, 1974. A cheque for this amount was sent to the vendor in January, 1975. (5) During the year, machinery which had a cost basis of Rs 8,000, and on which there was accumulated depreciation of Rs. 5,000, was sold for Rs 1,000. No other fixed assets were sold during the year. (6) The 6 per cent, 20-year bonds were dated and issued on January 2, 1964. Interest was payable on June 30 and December 31. They were sold originally at 104. These bonds were retired at 101 and accrued interest on March 31, 1974. (7) The 4 per cent, 4½-year bonds were dated January 1, 1974, and were sold on March 31 at 97 and accrued interest. Interest was payable semi-annually on June 30 and December 31. Expense of was Rs. 1,020. (8) The company acquired an 80 per cent issue control in the subsidiary company on January 2, 1974, for Rs. 1,00,000. The income statement of the subsidiary company for 1974 showed a net income of Rs. 7,500. (9) Extraordinary repairs to buildings of Rs. 7,000 were charged to Accumulated Depreciation – Buildings.

Required. From the above information, prepare (*i*) a statement of sources and uses of fund, and (*ii*) a schedule of net working capital changes. **(Adapted from AICPA Examination)**

Solution :

TUTORIAL NOTE

(1) PATENT ACCOUNT

	Rs		Rs.
To Opening balance	60,000	By Depreciation (balancing figure)	5,000
To Purchases	16,000	By Closing balance	71,000
Rs.	76,000	Rs.	76,000

(2) 6% BONDS PAYABLE ACCOUNT

	Rs.		Rs.
To Bank	1,01,000	By Opening balance	1,00,000
		By Loss on retiring	1,000
Rs.	1,01,000	Rs.	1,01,000

(3) 4% BONDS PAYABLE ACCOUNT

	Rs.		Rs.
To Balance	1,25,000	By Cash	1,21,250
		By Discount	3,750
Rs.	1,25,000	Rs.	1,25,000

(4) BONDS EXPENSE ACCOUNT

	Rs.		Rs.
To Discount	3,750	By Profit and loss account (balancing figure)	90
To Bank—Expenses of issue	1,020	By Closing balance	4,680
Rs.	4,770	Rs.	4,770

(5) INVESTMENT IN SUBSIDIARY COMPANY

	Rs.		Rs.
To Cash	1,00,000	By Closing balance	1,06,000
To Profit in *S* Ltd 80% of Rs. 7,500	6,000		
Rs.	1,06,000	Rs.	1,06,000

(6) MACHINERY ACCOUNT

	Rs.		Rs.
To Opening balance	1,90,000	By Machinery sold account	8,000
To Purchases	4,600	By Closing balance	1,86,600
Rs.	1,94,600	Rs.	1,94,600

(7) MACHINERY DISPOSAL ACCOUNT

	Rs.		Rs.
To Machinery account	8,000	By Depreciation	5,000
		By Sales	1,000
		By Profit and loss account (loss)	2,000
Rs.	8,000	Rs.	8,000

(8) DEPRECIATION FUND (MACHINERY) ACCOUNT

	Rs.		Rs.
To Machinery sold account	5,000	By Opening balance	1,30,000
To Closing balance	1,41,000	By Profit and loss account	16,000
Rs.	1,46,000	Rs.	1,46,000

(9) BUILDINGS ACCOUNT

	Rs.		Rs.
To Opening balance	5,07,500	By Closing balance	5,66,500
To Purchases	59,000		
Rs.	5,66,500	Rs.	5,66,500

(10) ACCUMULATED DEPRECIATION—BUILDING

	Rs		Rs.
To Repairs	7,000	By Opening balance	4,00,000
To Closing balance	4,07,000	By Profit and loss account	14,000
Rs.	4,14,000	Rs.	4,14,000

(11) REPAIRS ACCOUNT

	Rs.		Rs.
To Bank	7,000	By Accumulated depreciation—building	7,000
Rs.	7,000	Rs.	7,000

(12) NO-PAR STOCK ACCOUNT

	Rs.		Rs.
To Sale of 8,000 shares—cost price @ Rs. 6 per share	48,000*	By Opening balance	14,53,200
To Loss on sale of no-par stock	14,000*	By Issue of no-par stock for cash (balancing figure)	1,10,000
To Capital surplus (given)	2,00,000		
To Closing balance	13,01,200		
Rs.	15,63,200	Rs.	15,63,200

(13) NO-PAR STOCK DISPOSAL ACCOUNT

	Rs.		Rs.
To Cash—Sale of no-par stock	62,000	By no-par stock transfer	48,000
		By Loss—Transferred to no-par stock account	14,000
Rs.	62,000	Rs.	62,000

* Sale of no-par stock is at par with the redemption of no-par preference shares. Since they are redeemed at Rs. 62,000, there is a loss of Rs. 14,000.

(14) CALCULATION OF SOURCE FROM OPERATION

Profit from operation :		
Profit in first quarter		Rs. 25,000
Profit in last three quarters		80,000
Add Depreciation		
Patents	5,000	
Machinery	16,000	
Buildings	14,000	
		35,000
Add Goodwill written off		10,000
Discount written off (Rs. 3,750+Rs. 1,020—Rs. 4,680)		90
Loss on sale of machinery		2,000
Loss on payment of bond		1,000
		1,53,090
Less Share of profit in subsidiary company		6,000
Source from profit		Rs. 1,47,090

(*i*) STATEMENT OF SOURCES AND USES

Sources :	Rs.	*Application* :	Rs.
Profit from operation	1,47,090	Sale of nopar stock	62,000
Issue of share capital	14,000	Purchase of patent	16,000
Issue of 4% bond (Rs. 1,25,000—Rs. 3,750)	1,21,250	Purchase of machinery	4,600
Issue of no-par stock	1,10,000	Payments—6% bonds	1,01,000
Sale of machinery	1,000	Investment in subsidiary company	1,00,000
		Purchase of building	59,000
		Payment of premium on bonds	1,600
		Payment—Expenses of bond issue	1,020
		Payment for repairs to building	7,000
		Payment for insurance policy	300
		Total Outflow of funds	3,52,520
		Increase in working capital	40,820
Total in low of funds	Rs. 3,93,340		Rs. 3,93,340

(*ii*) SCHEDULE OF CHANGES IN WORKING CAPITAL

Assets	*1973* Rs.	*1974* Rs.	*Dr.* Rs.	*Cr.* Rs.	*Dr.* Rs.	*Cr.* Rs.
Cash	3,20,000	2,82,400	—	37,600	—	—
Accounts receivable	4,10,000	4,90,000	80,000	—	—	—
Inventory	6,60,000	6,95,000	35,000	—	—	—
Prepaid expenses	8,000	10,000	2,000	—	—	—
Inventory in subsidiary company	—	1,06,000	—	—	1,06,000	—
Cash surrender value of life insurance policy	1,800	2,100	—	—	300	—
Machinery	1,90,000	1,86,600	—	—	—	3,400
Buildings	5,07,500	5,66,500	—	—	59,000	—
Land	52,500	52,500	—	—	—	—
Patents	60,000	71,000	—	—	11,000	—
Goodwill	50,000	40,000	—	—	—	10,000
Bond discount	—	4,680	—	—	4,680	—
Rs.	22,59,800	25,06,780				

Liabilities						
Accrued taxes payable	80,000	92,000	—	12,000	—	—
Accounts payable	2,80,000	3,01,280	—	21,280	—	—
Dividends payable	—	60,000	—	—	—	60,000
Bonds payable 4%	—	1,25,000	—	—	—	1,25,000
Bonds payable 6%	1,00,000	—	—	—	1,00,000	—
Allowance for bad debts	40,000	45,300	—	5,300	—	—
Accumulated depreciation—building	4,00,000	4,07,000	—	—	—	7,000
Accumulated depreciation—machinery	1,30,000	1,41,000	—	—	—	11,000
Premium on bonds payable	1,600	—	—	—	1,600	—
No-par stock	14,53,200	13,01,200	—	—	1,52,000	—
Paidup capital	—	14,000	—	—	—	14,000
Reserve for plant expansion	—	10,000	—	—	—	10,000
Retained earnings	(2,25,000)	10,000	—	—	—	2,35,000
Rs.	22,59,800	25,06,780				
Net increase in working capital				40,820	40,820	
Rs.			1,17,000	1,17,000	4,75,400	4,75,400

ASSIGNMENT MATERIAL

Objective Type Questions

I. State whether the following statements are 'True' or 'False':

1. Cash is the most important source of funds for a business.

2. A transaction which affects only current accounts does not affect the flow of funds and, therefore, is not shown in the funds flow statement.

3. A balance sheet gives the position of funds as on a given date but does not reveal the flow of funds during a given period.

4. The first balance sheet of a business is also in a way the statement showing the changes in financial position.

5. If as a result of a business transaction the fund increases, then such a transaction is considered to be an application of fund.

6. Purchase of goods on credit results in flow of funds.

7. Payment of cash to creditors results in flow of funds.

8. Liabilities of a business indicate the uses of funds whereas the assets indicate the sources.

9. The most important and regular source of funds is the funds from operations.

10. The total of the sources of funds must necessarily equal the total uses of such funds.

(14) CALCULATION OF SOURCE FROM OPERATION

Profit from operation :		
Profit in first quarter		Rs. 25,000
Profit in last three quarters		80,000
Add Depreciation		
Patents	5,000	
Machinery	16,000	
Buildings	14,000	
		35,000
Add Goodwill written off		10,000
Discount written off (Rs. 3,750 + Rs. 1,020 − Rs. 4,680)		90
Loss on sale of machinery		2,000
Loss on payment of bond		1,000
		1,53,090
Less Share of profit in subsidiary company		6,000
Source from profit		Rs. 1,47,090

(*i*) STATEMENT OF SOURCES AND USES

Sources :	Rs.	*Application* :	Rs.
Profit from operation	1,47,090	Sale of nopar stock	62,000
Issue of share capital	14,000	Purchase of patent	16,000
Issue of 4% bond (Rs. 1,25,000 − Rs. 3,750)	1,21,250	Purchase of machinery	4,600
Issue of no-par stock	1,10,000	Payments—6% bonds	1,01,000
Sale of machinery	1,000	Investment in subsidiary company	1,00,000
		Purchase of building	59,000
		Payment of premium on bonds	1,600
		[illegible] of bond issue	1,020
		[illegible] to building	7,000
		Payment for insurance policy	300
		Total Outflow of funds	3,52,520
		Increase in working capital	40,820
Total in low of funds	Rs. 3,93,340		Rs. 3,93,340

(*ii*) SCHEDULE OF CHANGES IN WORKING CAPITAL

Assets	*1973* Rs.	*1974* Rs.	*Dr.* Rs.	*Cr.* Rs.	*Dr.* Rs.	*Cr.* Rs.
Cash	3,20,000	2,82,400	—	37,600	—	—
Accounts receivable	4,10,000	4,90,000	80,000	—	—	—
Inventory	6,60,000	6,95,000	35,000	—	—	—
Prepaid expenses	8,000	10,000	2,000	—	—	—
Inventory in subsidiary company	—	1,06,000	—	—	1,06,000	—
Cash surrender value of life insurance policy	1,800	2,100	—	—	300	—
Machinery	1,90,000	1,86,600	—	—	—	3,400
Buildings	5,07,500	5,66,500	—	—	59,000	—
Land	52,500	52,500	—	—	—	—
Patents	60,000	71,000	—	—	11,000	—
Goodwill	50,000	40,000	—	—	—	10,000
Bond discount	—	4,680	—	—	4,680	—

(*a*) application of fund
(*b*) source of fund
(*c*) no flow of fund

6. Profits made by a business result in an equal increase of
(*a*) cash balances
(*b*) working capital
(*c*) net worth of the business.

Questions

1. What is the primary purpose of statement of sources and uses ?

2. Would it be possible for a statement of sources and uses of working capital to show an increase in working capital if the business operated at a loss ?

3. Would it be possible for a statement of sources and uses of working capital to show a decrease in working capital if the business operated at a gain ?

4. *Point out how the net working capital provided by operation is* sometimes confused with net income.

5. Name some major sources of working capital.

6. List at least five examples of the use of working capital.

7. "You cannot pay your creditors with 'funds'. The only sensible solution, therefore, is to use cash as your definition of funds" For what purpose or purposes does the author of this comment probably use funds statement ? Explain.

8. "Profit and loss account is an example of statement of sources and uses of fund because sales is an example of source of funds and cost of goods sold, expenses paid or outstanding are examples of applications of funds." Do you agree with this ? If not, why ?

9. "During the first few years of operations, no business firm should be required to report income. Instead reports on the sources and uses of resources would provide much more information to investors and regulatory agencies." Do you agree ?

10. "Since a statement of sources and use of funds can be prepared where we have beginning and ending balance sheets and an income statement, the funds flow statement really contains no new information." Do you agree ? Explain.

11. [illegible] dividend [illegible]

Exercises

1. The Petrimix Corporation's annual report for 1974 shows the following account balances :

	1974	*1973*
Investment in other companies	Rs. 28,000	34,000
Surplus (retained)	67,500	57,000

A note to the statement reports that the corporation sold its 40% interest in the Hermis Corporation for Rs. 23,500. There was a gain of Rs. 13,500 on the transaction, and it was credited directly to retained surplus. What were the sources and use of funds arising out of transactions in investments in other companies and out of the operation ?

[*Source* : (*i*) *Sale of investments Rs. 23,500* ; *Uses* : (*i*) *Purchase of investments Rs. 4,000* ; *Loss from operation Rs. 3,000*]

2. Hercules Limited annual report for 1974 shows the following account balances :

	1974	*1973*
Investment in Metax Limited	Rs. 28,000	34,000

A note to the statements reports that the corporation sold 40% of its investments in Metax Limited at a gain of Rs. 8,400. Calculate sources and uses of fund. [*Source from sale of investments Rs. 22,000* ; *Application on the purchase of investments Rs. 7,600*]

3. Indicate whether each of the following transactions would be a source (increase) or use (decrease) of fund defined as working capital :

(*a*) Sale of merchandise on account. (*b*) Sale of merchandise for cash. (*c*) Borrowing cash on a short-term note payable. (*d*) Collection of accounts receivable. (*e*) Purchase of merchandise on account. (*f*) Purchase of equipment on account. (*g*) Purchase of equipment in exchange for long-term notes payable. (*h*) Declaration of dividend payable in cash. (*i*) Payment of dividend declared earlier. (*j*) Payment of account payable. (*k*) Return of merchandise to supplier for credit. (*l*) Issuance of capital stock for cash. (*m*) Issuance of dividend in the form of capital stock. (*n*) Recording periodic depreciation. (*o*) Sale of used equipment for cash. (*p*) The deposit of cash in a saving account. (*q*) Declaration of bonus dividend. (*r*) Payment of expenses. (*s*) Redemption of debenture by purchasing them in the open market. (*t*) Redemption of debenture by converting them in to equity shares. (*u*) Recording bad debts. (*v*) Recording the provision for bad debts. (*w*) Recording the provision for taxation. (*x*) Transferring the amount to Sinking Fund for the redemption of debentures. (*y*) Discontinuing the long-term deposit. (*z*) Recording the appreciation in the value of long-term assets. **21·1**

4. During January, 1971, the Madhu Company had the following unrelated transactions :

(*a*) Equipment was purchased for Rs. 5,000. One half was paid in cash and the balance was due in one year. (*b*) Accounts payable of Rs. 2,000 were paid in cash. (*c*) Sold for Rs. 10,000 a truck which was completely depreciated and not in use. (*d*) Purchased for Rs. 4,000 some shares of another company [illegible] a temporary investment of excess funds. (*e*) Purchased merchandis[illegible] of Rs. 50[illegible] account. (*f*) Issued a 90-day note in payment [illegible]ayab[illegible]850. (*g*) Paid interest on a note payable in the [illegible] 4,[illegible] note principal of Rs. 400. (*h*) Purchas[illegible] 1,200. (*i*) The owners invested an additi[illegible] (*j*) The company discovered a cas[illegible]

Considering the above transactions separately, show how would each affect a statement if funds were defined as working capital.

Problems

5. From the following Balance Sheet of *X* Co Ltd you are required to prepare a schedule of changes in working capital and Statement of Flow of Funds.

	Dec. 31, 1977	Dec. 31, 1978
Assets	Rs.	Rs.
Land and Buildings	50,000	50,000
Plant	24,000	34,000
Stock	9,000	7,000
Debtors	16,500	19,500
Cash at bank	4,000	9,000
	Rs. 1,03,500	1,19,500
Capital and Liabilities :		
Capital	80,000	85,000
Profit and loss appropriation account	14,500	24,500
Creditors	9,000	5,000
Mortgage	—	5,000
	Rs. 1,03,500	1,19,500

[B. Com. (Hons.) Delhi 1979]

[*Total sources Rs. 20,000* : *Purchase of plant Rs. 10,000* ; *Net increase in working capital Rs. 10,000*]

6. The summarised balance sheets of Alpha Ltd as on 31st March, 1973, 1974 and 1975 are given below :

	As on 31st March 1973	1974	1975
Liabilities :	(Rs. in lakhs)		
Paid-up capital	194	194	194
Borrowings (Long-term)			
(*i*) From banks	68	97	124
(*ii*) From others	281	343	379
Current liabilities	52	54	99
Total	Rs. 595	688	796

Assets :

Gross block	355	356	361
Less : Depreciation	69	95	122
Net block	286	261	239
Current assets	143	199	234
Profit and loss account	166	228	323
Total	Rs. 595	688	796

Prepare a statement of 'Net sources and uses of funds' for the yea ended on 31st March 1974 and 1975 and give your comments on the sam

[C.A. (Final) May, 197

[*1974 : Increase in working capital Rs. 54 lakhs ; Total of fun flow Rs. 91 lakh*

1975 : Decrease in working capital Rs. 10 lakhs. Total funds flow Rs. 73 lakh

7. Following are the comparative balance sheets of Novo Compan as at December 31 :

Capital and Liabilities	*1965*	*1966*	*Assets*	*1965*	*196*
Share capital	Rs. 70,000	74,000	Cash	Rs. 9,000	7,80
Debentures	12 000	6,000	Trade debtors (good)	14,900	17,70
Trade creditors	10,360	11,840	Stock in trade	49,200	42,70
Provision for doubtful debts	700	800	Land	20,000	30,00
Profit and loss	10,040	10,560	Goodwill	10,000	5,00
	Rs, 1,03,100	1,03,200		Rs. 1,03,100	1,03,20

Information : (1) Dividends were paid totalling Rs. 3,500. (2) Lan as purchased for Rs. 10,000 and amount provided for the amortizatio of goodwill totalled Rs. 5,000. (3) Debenture loan was repaid Rs. 6,000.

You are required to prepare funds flow statement and statement the changes in working capital and other assets. 21

[*Supply of funds Rs. 13,120 ; Application of funds Rs. 19,500 ; N profit made during the year Rs. 9,120*

Note. Provision for doubtful debts will be added back to net profits i order to calculate source from profits made during the year. This has been don because debtors are good and any provision for doubtful debts is in the nature o appropriation of profits.

8. From the following balance sheets of Nosuch Company Ltd a on December 31, 1978 and 1979 you are required to prepare funds flov statement for the year ending December 31. 1979, and schedule of change in working capital and changes in other assets :

Liabilities	1978	1979	Assets	1978	1979
Share capital	Rs. 1,00,000	1,00,000	Goodwill	Rs. 12,000	12,000
General reserve	14,000	18,000	Building	40,000	36 000
Profit and loss	16,000	13,000	Plant	37,000	36,000
Sundry creditors	8,000	5,400	Investment	10,000	11,000
Bills payable	1,200	800	Stock	30 000	23,400
Provision for taxation	16,000	18,000	Bills receivable	2,000	3,200
Provision for doubtful debts	400	600	Debtors	18,000	19,000
			Cash at bank	6,600	15,200
	Rs. 1,55,600	1,55,800		Rs. 1,55,600	1,55,800

Additional information : (*i*) Depreciation charged on plant was Rs. 4,000. (*ii*) Provision for taxation of Rs 19,000 was made during the year 1979. (*iii*) Interim dividend of Rs. 8,000 was paid during the year 1979. 21·5

[*Sources of Fund Rs. 36,000* ; *Application of Fund Rs. 29,000*]

[Hint. Prepare provision for taxation and loss accounts. Provision for doubtful debts will not be added back to calculate source from operation because it is in the nature of a charge. Tax paid is treated as application and provision made during the year is added back to profit. Investments, being of high amount, have been treated as fixed assets]

9. The balance sheets of *A*, *B* & Co Ltd as at the end of 1968 and 1969 are given below :

Capital and liabilities	1968	1969	Assets	1968	1969
Share capital	Rs. 1,00,000	1,50,000	Freehold land	Rs 1,00,000	1,00,000
Share premium	—	5,000	Plant at cost	1,04,000	1,00,000
General reserve	50,000	60,000	Furniture at cost	7,000	9,000
Profit and loss account	10,000	17,000	Investments at cost	60,000	80,000
6% debentures	70,000	50,000	Debtors	30,000	70,000
Provision for depreciation of plant	50,000	56,000	Stock	60,000	65,000
Provision for depreciation of furniture	5,000	6,000	Cash	30,000	45,000
Provision for taxation	20,000	30,000			
Sundry creditors	86,000	95,000			
	Rs. 3,91,000	4,69,000		Rs. 3,91,000	4,69,000

A plant purchased for Rs 4,000 (Depreciation Rs. 2,000) was sold for cash Rs. 800 on September 30, 1969. On June 30, 1969 an item of furniture was purchased for Rs 2,000. These were the only transactions concerning fixed assets during 1969. Depreciation on plant was provided at 8% on cost (the sold out item is not taken into consideration) and on furniture at 12½% on average cost. A dividend of 22½% on original shares was paid.

You are required to prepare a statement showing sources and destination of funds during 1969. (C.A. Final, 1970) 21·[illegible]

[[illegible] Rs. 51,[illegible]

10. From the information provided, you are required to prepare "Source and Disposition of Funds" statement, explaining how CD has improved its cash position in the year ended 31st December 1969.

The summarised balance sheets of CD Limited as at 31st December, 1968 and 31st December, 1969 were as follows :

	1968	1969
	Rs.	Rs.
Issued share capital	1,00,000	1,50,000
Share premium	15,000	35,000
Profit and loss account	28,000	70,000
Debentures	70,000	30,000
Bank overdraft	14,000	—
Creditors	34,000	48,000
Proposed dividends	15,000	20,000
Depreciation—Plant	45,000	54,000
—Fixtures	13,000	15,000
Rs.	3,34,000	4,22,000
Freehold property at cost	1,10,000	1,30,000
Plant and machinery at cost	1,20,000	1,51,000
Fixtures and fittings at cost	24,000	29,000
Stocks	37,000	51,000
Debtors	43,000	44,000
Bank balance	—	16,000
Premium on redeemed debentures	—	1,000
Rs.	3,34,000	4,22,000

The following additional information is relevant :

(*i*) There had been no disposals of freehold property in the year.

(*ii*) A machine tool which had cost Rs. 8,000 and in respect of which Rs. 6,000 depreciation had been provided was sold for Rs. 3,000 and fixtures which had cost Rs. 5,000 in respect of which depreciation of Rs. 2,000 had been provided were sold for Rs. 1,000. The profits and losses on these transactions had been dealt with through the profit and loss account.

(*iii*) The actual premium paid on the redemption of the debentures was Rs. 2,000 of which Rs. 1,000 had been written off to the profit and loss account.

(*iv*) No interim dividend has been paid.

(I.C.W.A. England December, 1970)

[*Profit from operations Rs. 83,000 ; Increase in working capital (other than cash) Rs. 1,000. Improvement in cash Rs. 30,000. Total of source and uses Rs. 1,57,000*]

Hint. Subtract from the total increase in working capital, the increase with respect to other items. The balance will indicate improvement in cash.]

11. The following balance sheets have been prepared from the books of Rais Limited as appearing on 31-12-1977 and 31-12-1978.

BALANCE SHEETS

		1977	1978
		Rs.	Rs.
Equity capital		4,00,0000	6,00,000
Share premium		1,00,000	1,10,000
General reserve		2,00,000	2,20,000
Debenture redemption reserve		1,00,000	1,10,000
Debentures		3,00,000	2,90,000
Taxation provission		40,000	35,000
Secured loan		2,00,000	1,00,000
Current liabilities		24,000	30,000
	Rs.	13,64,000	14,95,000
Buildings		5,70,000	5,00,000
Plant and machinery		3,60,000	3,51,000
Furniture		90,000	81,000
Cash in hand		5,000	8,000
Stock		1,55,000	1,45,000
Debtors		1,80,000	1,60,000
Bills receivable		4,000	40,000
Investments		—	2,10,000
	Rs.	13,64,000	14,95,000

(a) During 1978, the company paid 12% dividend on its equity share capital of Rs. 4,00,000.

(b) The shares are of Rs. 100 each fully paid.

(c) Taxation provision of 1977 was utilised to the extent of Rs. 30,000 for income-tax paid in 1978.

(d) Depreciation was charged on buildings at 5%, on plant and machinery at 10% and on furniture at 10% for a full one year.

(e) A building worth Rs. 70,000 was sold on 1-1-1978 at Rs. 60,000 and a new building was constructed at a value of Rs. 25,000 on 31-12-1978.

(f) A machine was purchased at a cost of Rs. 40,000 on 1-1-1978 while a machine having a book value of Rs. 10,000 was sold on 1-7-1978 at Rs. 20,000.

Prepare a statement showing movement in working capital, profit and loss appropriation account and a statement showing the sources and application of funds. [A.C.S. (Final) June 1979]

[*Net increase in working capital Rs. 3,000 ; Funds from operations Rs. 1,76,000 ; Total of funds flow statement 4,66,000*]

Note. Investment is not considered a current asset.

12. Balance sheets and income statement of Gr Limited as on December 31, 1968 and 1969 are as follo

Additional information. New plant assets costing Rs. 80,000 were purchased during the year.

Required. From the foregoing information, prepare (*a*) a statement of sources and uses of funds for the year 1979, (*b*) a schedule of changes in net working capital. 21·9

[*Source of funds Rs. 2,57,000 ; Application of funds Rs. 1,18.500 ; Source from profit Rs. 1,97,000*]

15. The following is the Balance Sheet of a concern as on 30th June 1974 :

Capital	Rs. 12,00,000	Fixed assets (at cost *less* depreciation)	Rs. 5,00,000
Trade creditors	2,50,000	Stock	4,50,000
Profit and loss account	80,000	Debtors	2,50,000
		Cash and bank balances	3,30,000
Rs.	15,30,000	Rs.	15,30,000

The management makes the following estimates for the year ended 30th June 1975 :

	Up to 31st May 1975	June 1975
Purchases	Rs. 15,20,000	1,05,000
Sales	22,40,000	2,50,000

Additional information ;

(*i*) It has been decided to invest Rs. 1,50,000 in purchases of fixed assets which are depreciated @ 10%.

(*ii*) The time lag for payment to creditors and receipt from debtors is one month.

(*iii*) The business earns a gross profit of $33\frac{1}{3}\%$ on turnover.

(*iv*) Sundry expenses against gross profit will amount to 12% of the turnover (excluding depreciation on fixed assets).

You are required to prepare a projected Fund Flow Statement for the year ended 30th June 1975. [C.A. (Final) November 1974]

[*Increase in working capital Rs. 3,81,200 : Projected Gross profit Rs. 8,30,000 : Projected Net profit Rs. 4,66,200 ; Projected B/S Total Rs. 18,51,200 ; Total of the Projected Funds Flow Statement Rs. 5,31,200*]

16. The comparative balance sheets of Bombay Industries Ltd as on December 31, 1977 and 1978 are as under :

Liabilities	*Figures in lakhs* *1977*	*1978*	*Assets*	*Figures in lakhs* *1977*	*1978*
Current liabilities :	Rs.	Rs.	*Current assets* :	Rs.	Rs.
Sundry creditors	40 40	43·20	Cash and bank	44 60	47·80
Provision for taxation	10·80	12·20	Debtors	10·80	17·00
Liabilities for expenses	2·60	1·00	Stock-in-trade	44·00	67·20
			Miscellaneous (including marketable securities)	30 20	8·00
Total current liabilities			Total current assets		

Long-term liabilities :			*Fixed assets :*		
Mortgage loan	22 00	21 00	Plant, machinery and building	283 40	368 00
			Less Total depreciation	—25·80	—34 20
				257 60	333 80
			Land	50 00	50·00
Total liabilities Rs.	75 80	77·40	Total fixed assets Rs.	307 60	383 80
Owner's equity :					
Paid-up capital	280 00	320 00	*Long-term investments*	42 40	25 20
Reserves and surplus	140·60	163 00			
Total owner's equity Rs.	420 60	483 60	*Intangible assets* Rs.	16 80	12 00

The income for the year amounted to Rs. 57·80 lakhs after charging depreciation of Rs. 8 40 lakhs but before making the following adjustments : (*i*) Profit on sale of land purchased and sold in 1978 Rs. 15·00 lakhs ; (*ii*) Loss on sale of marketable securities Rs. 2·80 lakhs ; (*iii*) Write off intangible assets Rs. 4·80 lakhs ; (*iv*) Write off long-term investment Rs. 17 20 lakhs.

The dividend declared and paid during the year amounted to Rs 25·60 lakhs. From the above particulars prepare : (*i*) Statement of sources and application of funds, and (*ii*) Statement of changes in working capital. (Management Accountancy—C.A. Institute) **21·10**

(Net increase in working capital Rs. 9 20 lakh.

Notes : 1. Provision for tax made during the last year has been used for paying tax this year and is an application of fund Provision made during the current year has been added back for calculating the source from operation

2. Dividend paid has been shown as an application It has been added back to the profit for calculating the source from operation.

3. Marketable securities have been classified as current assets. A loss on its sale will not affect the calculation of source from operation.

17. The following accounts of a company have been prepared for the year ended 30th September 1976 :

BALANCE SHEET

	1976 Rs. (*in millions*)	*1975* Rs. (*in millions*)
Share capital	273 3	266·5
Share premium	71 9	45·6
Reserves	545·2	467·2
Long-term debt	478 8	360·0
	1,369·2	1,139·3
Represented by		
Property, plant and equipment	782·9	695·7
Preproduction expenditure	53·5	40·8
Exploration and development	4·8	10 0
Associated companies	101·8	86·1

	Rs.	Rs.	Rs.	Rs.
Current assets :				
Stock	314·6		243·2	
Debtors	247·5		221·0	
Bank	301·2		259·1	
	863·3		723·3	
Less : Current Liabilities				
Creditors	261·0		240·0	
Short-term debt	94·8		72·8	
Provision for tax	68·2		93·9	
Dividend	13·1		9·9	
	437·1	426·2	416·6	306·7
		1,369·2		1,139·3

			1976	1975
Profit and Loss Account				
Sales revenue			1,184·0	
Operating profit			92·8	
Share of profit of associated companies			6·0	
Interest receivable			26·4	
			125·2	
Deduct interest payable			37·9	
Profit before tax			87·3	
Tax on profit for the year			32·4	
Net profit after tax before extra-ordinary items			54·9	
Extraordinary items			22·3	
Net profit after tax and extra-ordinary items			77·2	
Dividends paid and proposed				
Preference		0·4		
Ordinary				(0·4)
Interim paid		6·3		(4·1)
Final proposed		6·6		(5·6)
			13·3	
Retained				
By company	62·3			
By associates	1·6		63·9	

During the year 2,72,000 ordinary shares of Rs. 25 each were issued at a premium of Rs. 10 per share under a rights issue made to ordinary shareholders. The expenses of the issue amounting to Rs. 9,00,000 were charged against the share premium account.

The investment in associated companies was revalued during the year providing a surplus over book value of Rs. 14·1 million. There was no additional investment.

Operating profit is after charging depreciation on property, plant and equipment of Rs. 77·1 million, preproduction expenditure of Rs. 8·6 million and exploration and development cost of Rs. 22·2 million.

Prepare a statement showing the changes in financial position for the year ended 30th September 1976.

(Adapted from Professional Examination II England, December 1976)

(Increase in working capital Rs. 97 million : Total of funds flow statement Rs. 343 1 million ; Funds from operations Rs. 190·3 million)

Hints : (1) Profits retained by associated companies must be subtracted to arrive at funds from operations.

(2) Production expenditure capitalised and share issue expenses and items of application.

(3) Short-term debt is an item of working capital.

18 The following are the summarised trial balances of Honesty Ltd as at December 31, 1971 and December 31, 1972 :

Accounts		*December 31, 1971*		*December 31, 1972*	
		Dr	*Cr.*	*Dr*	*Cr*
Issued share capital	Rs	—	8,00,000	—	8,00,000
Capital reserve		—	—	—	2,00,000
8% Debentures		—	—	—	2,50,000
Discount on issue of debentures		—	—	5,000	—
Land and building		5,00,000	—	4,00,000	—
Plant and machinery		10,00,000	—	12,50,000	—
Provision for depreciation on fixed assets		—	4,00,000	—	5,00,000
Profit and loss account balance on 1st January		—	3,00,000	—	4,50,000
Net profit for the year		—	2,30,000		3,00,000
Dividend for the previous year		80,000	—	80,000	—
Provision for doubtful debts		—	20,000	—	35,000
Trade investments at cost		1,00,000	—	3,00,000	—
Current assets		7,00,000	—	8,50,000	—
Current liabilities		—	3,50,000	—	2,50,000
Bank overdraft		—	2,80,000	—	1,00,000
	Rs.	23,80,000	23,80,000	28,85,000	28,85,000

The following additional information is available :

(1) During the year, land and building having an original cost of Rs. 1,00,000 and a written down value of Rs. 75,000 have been sold for Rs. 3,00,000. The capital profit has been transferred to capital reserve and the profit equivalent to the depreciation written off in the past has been included in the profit for the year.

(2) On January 1, 1972, the company issued debentures of a face value of Rs. 2,50,000 at a discount of 5%. Part of the discount has been written off out of the profits.

Prepare a statement of sources and application of funds during the year. **(C.A. Final 1973)**

[*Total sources Rs. 9,45,000 ; Total applications Rs. 5,30,000 ; Increase in working capital Rs. 4,15,000*]

Hints : (*i*) Opening and closing balances of profit and loss account are calculated by adding opening balance of profit and net profit made during the year and deducting therefrom dividend paid of the previous year. Thus opening balance will be Rs. 4,50,000 (*i.e.*, Rs. 3,00,000+Rs. 2,30,000—Rs. 80,000) and closing balance will be Rs. 6,70,000 (*i.e.*, Rs. 4,50,000+Rs. 3,00,000—Rs. 80,000).

(*ii*) Source from operation is Rs. 4,07,500.

(*iii*) Trade investments are treated as non-current assets.

(*iv*) Provision for depreciation Rs. 1,25,000, discount on debentures Rs. 7,500 are added to net profits.

19. The following are the Balance Sheets of Strong Ltd as on 31st March, 1977 and 31st March, 1978 :

Liabilities	*31-3-1977* Rs.	*31-3-1978* Rs.	*Assets*	*31-3-1977* Rs.	*31-3-1978* Rs.
Equity share capital (shares of Rs. 10 each)	2,00,000	2,40,900	Goodwill	15,000	10,000
Less : Calls in arrears	2,400	800	Machineries	90,000	90,800
	1,97,600	2,40,100	Furniture	10,000	9,500
Add : Forfeited shares	—	1,600	Building	70,000	68,000
		2,41,700	Vehicles	30,000	24,000
6% Preference share capital (shares of Rs. 10 each)	1,00,000	2,000	Investments	20,000	12,000
Less : Calls in arrears	1,200	400	Stock	65,000	60,000
	98,800	1,600	Sundry debtors	70,000	60,000
General reserve	60,000	20,000	Income tax receivable	—	400
Profit & loss a/c	10,000	32,900	Cash at bank	92,400	1,02,800
Capital reserve	—	4,200	Advance Tax	25,000	24,000
Capital redemption reserve	—	55,100			
Bank Loan	10,000	6,000			
Sundry creditors	85,000	72,000			
Provision for taxation	26,000	28,000			
Rs.	4,87,400	4,61,500	Rs.	4,87,400	4,61,500

Additional Information

(*i*) During the year, preference shares were redeemed at a premium of 5%, and, before redemption, the preference shareholders, whose calls were in arrears, were given notice to pay the arrear money. Holders of 400 shares duly paid the call money and the rest could not, and so the Directors proceeded on redemption. The Directors made the minimum necessary fresh issue of shares, after utilising fully the balance of Rs. 60,000 in the General Reserve.

Calls in arrears, for both classes of shares, were in respect of Final Call @ Rs. 2 per share.

(*ii*) Of the arrear money on Equity Shares, 800 shares were forfeited, out of which 600 shares were reissued @ Rs. 9 per share and the money duly received.

(*iii*) Additional bank loan obtained during the year amounted to Rs. 8,000.

(*iv*) Machinery costing Rs. 6,000 was disposed of during the year for Rs. 4,200 (No depreciation had been provided on the sold item).

(*v*) Investments, costing Rs. 8,000, were also sold for Rs 9,000.

(*vi*) Addition to machineries during the year : Rs. 10,000.

You are required to prepare a statement of sources and applications of the funds for the year ended 31st March, 1978.

[C.A. Final (New) Nov. 1978]

(*Increase in working capital Rs. 5,800 ; Total of source and applications Rs. 1,30,700*]

20. Following are the summarised balance sheets of *XY* Ltd, as on March 31, 1979, and 1980 :

Liabilities	Rs	Rs	*Assets*	Rs.	Rs.
Equity share capital	37,500	60,000	Fixed assets	1,20,035	1,26,865
6% Redeemable preference shares	50,000	40,000	*Less* : Depreciation to date	45,010	49,240
Plant replacement reserve	7,500	5,000		75,025	77,625
Long-term loans	—	20,000	Investments	30,500	38,000
Bank loan	11,000	—	Inventory	49,000	52,000
Trade creditors	42,225	37,775	Debtors	44,000	42,500
Proposed dividend on equity shares	6,000	12,000	Cash	5,875	16,000
Profit and loss	50,175	51,350			
Rs.	2,04,400	2,26,125	Rs.	2,04,400	2,26,125

Additional information : (*a*) Rs. 12,500 was capitalised by making equity shares fully paid up. (*b*) Final dividend on preference share capital and interim dividend of Rs 2,000 on equity shares were paid on March 31, 1980. (*c*) Proposed dividend of year the ending on March 31, 1979 was paid during the year 1979-80 (*d*) Difference in fixed assets replacement reserve account represents transfer to profit and loss appropriation account. (*e*) Fixed assets were revalued by Rs 1,500 in excess of the book value and the amount was credited to profit and loss account. (*f*) Rs. 850 being expenditure on fixed assets which on March 31, 1979 was carried forward in debtors account, was transferred back to fixed assets in 1980. (*g*) Fixed assets costing Rs. 3,000 (accumulated depreciation thereon being Rs. 2,400) was sold for Rs. 125. The loss was charged to profit and loss account. (*h*) During the year 1979-80, redeemable preference shares of Rs. 10,000 were redeemed at 10% premium For this purpose fresh issue of equity shares of Rs. 10,000 was made.

[*Net increase in working capital Rs. 27,925*]

[Hint. Transfer of Rs. 850 from debtors account to fixed assets should be brought back to the original position by crediting debtors account and debiting fixed assets account appearing in the balance sheet of 1979. This must be done to assest the amount applied in the purchase of fixed assets and change in current assets of the business.]

21. The net changes in the balance sheet account of *X* Co. for the year 1970 are shown below :

	Debit Rs.	*Credit* Rs.		*Debit* Rs.	*Credit* Rs.
Investment		25,000	Discount on bonds	2,000	
Land	3,200		Bonds payable		40,000
Buildings	35,000		Capital stock—pref.	10,000	
Machinery	6,000		Capital stock—common		12,400
Office equipment		1,500	Premium on common stock		5,600
Allowance for depreciation :			Retained earnings		6,800
Building		2,000	Working capital	37,400	
Machinery		900			
Office equipment	600				
			Total Rs.	94,200	94,200

Additional information :

(1) Cash dividends of Rs. 18,000 were declared Dec. 15, 1970, payable Jan. 15, 1971. A 2 per cent stock dividend was issued on March 31, 1970 when the market value was Rs. 12·50 per share.

(2) The investments were sold for Rs. 27,500.

(3) A building which cost Rs. 45,000 and had a book value of Rs. 40,500 was sold for Rs. 50,000.

(4) The following entry was made to record an exchange of an old machine for a new one :

Machinery account	*Dr.*	Rs. 13,000	
Allowance for depreciation account—Machinery	*Dr.*	5,000	
To Machinery account			Rs. 7,000
To Cash account			11,000

(5) A fully depreciated office machine which cost Rs. 1,500 was written off.

(6) Preferred stock of Rs. 10,000 par value was redeemed for Rs. 10,200.

(7) The company sold 1,000 shares of its common stock (par value Rs. 10) on June 15, 1970, for Rs. 15 a share. There were 13,240 shares outstanding on Dec. 31, 1970.

Required. Statement of sources and applications of funds (net working capital) for the year 1970.

(Bachelor of Business Administration. Feb. 1970 ; University of Singapore) 21·14

(Net increase in sources of fund Rs. 37,400)

22*. The following funds statement and additional information pertain to the operation of Blue Print Limited during the year ended December , 1979 :

Blue Print Limited

STATEMENT OF SOURCES AND APPLICATIONS OF NET WORKING CAPITAL

For the year ended December 31, 1979

	Rs.	Rs.
Sources :		
Funds provided by operations	51,500	
From issue of debentures	1,00,000	
From issue of equity shares (15,000 shares @ Rs. 10 per share fully paid)	2,40,000	
		3,91,500
Uses :		
For acquisition of plant and equipmen	1,70,000	
For payment of dividend	15,000	
		1,85,000
Net increase in working capital	Rs.	2,06,500

Additional information : (1) The Blue Print Limited was incorporated on January 1, 1979. (2) Plant was purchased on Janũary 1, 1979 and plant of the value of Rs. 10,000 was destroyed by fire on December 31, 1979. (3) Expected life of plant is 10 years. The company uses the straight-line method of depreciation.

You are required : (*a*) To compute the balance of net income of Blue Print Limited and (*b*) Prepare a balance sheet as on 31-12-1979.

[*Total of balance sheet Rs. 3,49,500 ; Balance of profit and loss appropriation account Rs. 9,500*] **21·15**

[**Hint.** In the absence of details current liabilities cannot be shown separately. The balance of these has been shown as one item in the balance sheet]

23*. Given below are the changes in account balances of Ahmed, a retailer in general merchandise, for the fiscal year ended October 31, 1979 :

Cash	Rs 48,000	Accumulated depreciation	Rs 10,000
Debtors	(8 000)	Accounts payable	(5,000)
Provision for doubtful debts	(200)	Accrued liabilities	400
Stock-in-trade	(15,000)	Ahmed, capital	44,800
Equipment	25,000		

The parentheses denote a decrease in the debit or credit balances normal to a given account.

Debtors of Rs. 1,000 were written off as uncollectible. Equipment costing Rs. 7,500 was sold for Rs 3,000 resulting in a loss of Rs. 600. Net income, including the loss on equipment, amounted to Rs 64,800.

You are required to prepare statement of sources and uses of fund.

[*Increase in net working capital Rs. 29,800 ; Sources Rs. 82,300 Application Rs. 52,500*] **21·16**

SUGGESTED READING

1. [illegible] Mohile
2. [illegible]
3. [illegible]

4

Cash Budgeting and Cash Flow Techniques

For a finance manager of any business the most important function is the proper management of cash. By proper management it is meant that there is adequate cash to meet the maturing obligations and at the same time there is no surplus cash remaining idle. Cash is procured by a business from owners and from lenders – in both cases at a cost Therefore the finance manager should ensure that surplus cash, not immediately needed by the business, is properly invested. Again, if the cash is not sufficient to meet the business obligations as and when they fall due, the business may have to face the danger of technical insolvency. Many companies, otherwise successful, have failed because of improper cash management. In advanced countries ratio-analysis is applied for diagnosing insolvency. One of the ratios which is becoming increasingly popular in this context is the ratio of current assets to total liabilities in general and the ratio of cash to total liabilities in particular. Cash is the most liquid asset which can be used for discharging immediate liabilities. Hence the importance of cash management. Other current assets being less liquid than cash can only be used for discharging liabilities over a period of time, because such assets will have to be first converted into cash and then only can be applied for payment of liabilities. From this it follows that while funds flow statements are useful for planning long-term operations of the business, cash-flow statements are useful for planning short-term operations of the business. The most usual step in the management of cash is to prepare a cash forecast or cash budget for a given period, usually six months or one year. The budget may be prepared on a weekly basis or a monthly basis, depending upon the internal requirements of the business. A properly conceived cash budget offers the following advantages :

1, It ensures that cash is available at a time it is needed.

2. It enables managment to check the tendency to overspend. As the available resources are known, payments can be tailored to match the resources.

3. The management can also decide the form of borrowing after seeing the nature of cash deficit as revealed by the cash budget. If the deficit is temporary, short-term borrowing such as an arrangement for an overdraft with the bank is sufficient. Alternatively the business may obtain longer credit period from its suppliers. But if it is going to be a medium term feature, the business should think of public deposits or a term loan from a commercial bank or some other financial institution.

4. If the budget shows the availability of excess cash then management must consides suitable short-term and long-term investments as the case may be. No doubt, in contrast to other current assets such as book debts or stocks the investment in cash or cash equivalents involves no risk. There are little or no opeating costs. But it should be borne in mind that *too much cash on hand beyond the operational requirements of the business* may reduce the rate of return on capital employed Therefore, as in the case of other assets, business must try to secure the optimum productivity of this asset as well. Viewed in this context a highly liquid position is indicative of poor rather than good management.

5. Cash budget also enables the management to formulate a suitable dividend policy. If the business is not able to obtain sufficient inflow of cash, then the business can restrict its cash dividends.

6. Cash budget also enables the management to ascertain the possibility of financing the capital expenditure projects internally.

7. It also enables the management to take advantage of cash discounts during periods when surplus cash is available.

Methods of Cash Budgeting

Cash budgeting can be done in any one of the following three ways :

1. The receipts and payments method.
2. The adjusted profit and loss method.
3. The balance sheet method.

While the first method is popular for short-term forecasting, the other two methods are employed for long-term forecasting The second and third methods are not as accurate and as detailed as the first method but serve the purpose of long-range planning.

1. The Receipts and Payments Method. This is virtually summarised cash account. The budget is prepared on the basis of estimated receipts and payments of cash and the pro-forma given below may be very useful in the preparation of the budget.

4

Cash Budgeting and Cash Flow Techniques

For a finance manager of any business the most important function is the proper management of cash. By proper management it is meant that there is adequate cash to meet the maturing obligations and at the same time there is no surplus cash remaining idle. Cash is procured by a business from owners and from lenders – in both cases at a cost. Therefore the finance manager should ensure that surplus cash, not immediately needed by the business, is properly invested. Again, if the cash is not sufficient to meet the business obligations as and when they fall due, the business may have to face the danger of technical insolvency. Many companies, otherwise successful, have failed because of improper cash management. In advanced countries ratio-analysis is applied for diagnosing insolvency. One of the ratios which is becoming increasingly popular in this context is the ratio of current assets to total liabilities in general and the ratio of cash to total liabilities in particular. Cash is the most liquid asset which can be used for discharging immediate liabilities. Hence the importance of cash management. Other current assets being less liquid than cash can only be used for discharging liabilities over a period of time, because such assets will have to be first converted into cash and then only can be applied for payment of liabilities. From this it follows that while funds flow statements are useful for planning long-term operations of the business, cash-flow statements are useful for planning short-term operations of the business. The most usual step in the management of cash is to prepare a cash forecast or cash budget for a given period, usually six months or one year. The budget may be prepared on a weekly basis or a monthly basis, depending upon the internal requirements of the business. A properly conceived cash budget offers the following advantages :

1, It ensures that cash is available at a time it is needed.

2. It enables managment to check the tendency to overspend. A the available resources are known, payments can be tailored to match th resources.

3. The management can also decide the form of borrowing afte seeing the nature of cash deficit as revealed by the cash budget. If th deficit is temporary, short-term borrowing such as an arrangement for a overdraft with the bank is sufficient. Alternatively the business may obtai longer credit period from its suppliers. But if it is going to be a mediun term feature, the business should think of public deposits or a term loar from a commercial bank or some other financial institution.

4. If the budget shows the availability of excess cash then manage ment must consides suitable short-term and long-term investments as th case may be. No doubt, in contrast to other current assets such as bool debts or stocks the investment in cash or cash equivalents involves no risk There are little or no opeating costs. But it should be borne in mind tha too much cash on hand beyond the operational requirements of the busines may reduce the rate of return on capital employed Therefore, as in th case of other assets, business must try to secure the optimum productivit of this asset as well Viewed in this context a highly liquid position i indicative of poo: rather than good management

5. Cash budget also enables the management to formulate a suitabl dividend policy. If the business is not able to obtain sufficient inflow o cash, then the business can restrict its cash dividends.

6. Cash budget also enables the management to ascertain the possi bility of financing the capital expenditure projects internally.

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1. *The receipts and payments method.*
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1. **The Receipts and Payments Method** This is virtually summa rised cash account. The budget is prepared on the basis of estimate receipts and payments of cash and the pro-forma given below may be ver useful in the preparation of the budget.

Cash Budget	*Period April to June*		
	April Rs.	*May* Rs.	*June* Rs.
Receipts from Trading			
Cash sales			
Collection from debtors			
Other receipts			
Sales of fixed assets			
Loans and borrowings			
Issue of share capital			
Interest/dividends on investments			
Total Receipts			
Trade payments			
Cash purchases			
Payments to creditors			
Labour			
Factory overheads			
Administrative overheads			
Selling and Distribution overheads			
Non-Trading Payments			
Interest			
Dividends			
Taxation			
Purchase of assets			
Total payments			
Net cash surplus/deficit			
Opening cash for the month			
Closing cash for the month			

(*a*) Receipts from trading : The amount of cash sales and amounts received from debtors are included under this head. From the past experience sales department will be in a position to forecast the sales and indicate the proportion of cash and credit sales in the total sales. In the case of credit sales, the time-lag between sale and collection can be ascertained with reference to the period of credit allowed to customers.

(*b*) Other receipts from non-operating sources such as interest/dividends from investments, rents, tax refunds can reasonably be estimated. So is the case of receipts from sale of fixed assets. Receipts from borrowings and investors will be a balancing figure to match the budgeted total payments.

(*c*) Trade payments comprise several payments for operations such as cash purchases, payments to creditors, wages to workers, manufacturing, administrative and selling expenses. The buying department will be able to estimate the total purchases and the proportion of cash to credit purchases. The business knows the credit period allowed by suppliers. From that information, it can find out the amounts payable to creditors during each of the budget periods.

(*d*) Non-trading payments such as interest, dividend and tax payments can reasonably be estimated. So is the case regarding payments to be made for the purchase of fixed assets, and amounts to be repaid towards loans, debentures and redeemable preference shares.

Illustration 1. Make out a cash budget for October, November and December 1979 from the following information :

(*i*) Actual and budgeted purchases

	Actual		*Budget*
July	Rs. 40,000	October	Rs. 50,000
August	50,000	November	40,000
September	45,000	December	35,000

(*ii*) Actual and budgeted sales :

	Actual		*Budget*
July	Rs. 90,000	October	Rs. 90,000
August	80,000	November	80,000
September	85,000	December	80,000

(*iii*) Actual and budgeted wages

	Actual		*Budget*
July	Rs. 25,000	October	Rs. 30,000
August	30,000	November	30,000
September	35,000	December	35,000

(*iv*) Actual and budgeted general expenses :

	Actual		*Budget*
July	Rs. 7,000	October	Rs. 8,000
August	6,000	November	6,000
September	5,000	December	7,000

(*v*) Incentive bonus payable in October	2.000
Advance income-tax in December	5.000
Plant to be purchased in November	15,000

(*vi*) 10% of purchases and sales are on cash basis.

(*vii*) Rent Rs. 250 payable each month.

(*viii*) Credit purchases are paid after one month and credit sales are collected after two months. Time lag in wages and general expenses—half month.

(*ix*) Cash and bank balances on 1st October 1979—Rs. 40,000.

[C.A. Final (New) November 1979]

Solution :

Cash budget for the period Oct. to Dec. '79	*October* Rs.	*November* Rs	*December* Rs.
Trading receipts			
Cash sales	9,000	8.000	8,000
Collection from debtors	72,000	76,500	81,000
Other receipts	—	—	—
Total receipts	81,000	84.500	89,000

Trading payments :			
Cash purchases	5,000	4,000	3,500
Payments to creditors	40,500	45,000	36,000
Rent	250	250	250
Wages	32,500	30,000	32,500
General expenses	5,500	7,000	6,500
Incentive bonus	2,000	—	—
Non-trading payments			
Advance income-tax	—	—	5,000
Purchase of plant	—	15,000	—
Total payments	85,750	1,01,250	83,750
Net cash surplus/deficit	(4,750)	(16,750)	5,250
Opening cash for the month	40,000	35,250	18,500
Closing cash for the month	35,250	18,500	23,750

TUTORIAL NOTES

(1) Collection from debtors :

October 1979.

Sales for August	Rs. 80,000
Less : Cash sales (10%)	8,000
	Rs. 72,000

Credit sales of August will be collected o October, as credit of ; months is allowed on sales. Likewise fig re calculated for the ıanths of November and December.

(2) Payments to creditors :

October 1979

Purchases for September	Rs. 45,000
Less : Cash purchases (10%)	4,500
	Rs. 40,500

Credit purchases for September will be paid for in October, as uppliers are allowing a credit of one month. Likewise figures are calulated for the months of November and December.

(3) Wages :

October 1979

Half of September wages	Rs. 17,500
Half of October wages	15,000
	Rs. 32,500

Since there is a time-lag of half monthi payment of wages, in October the wages of the second ha f of Septen ıd the first half of October will be paid. Likewise wages ha calculated for the months of November and December.

(4) General expenses :

Figures are calculated on the same basis as for wages.

Illustration 2. Srivatsasa Limited was incorporated on 1st December, 1979. It is proposed to commence trading business on 1st January 1980 and the following are the budgeted details for the six months up to 30th June 1980.

(*a*) On 1st January the company will acquire buildings at a cost of Rs. 50,000, furniture at a cost of Rs. 5,000 and machinery at a cost of 25,000

(*b*) Sales will be Rs. 60,000 each month. The mark up is 50% on cost.

(*c*) Overhead expenses will amount to Rs. 10,000 each month except in April when they will amount to Rs. 15,000. All expenses are to be paid in the same month in which they are incurred.

(*d*) An initial stock of goods is to be bought on 1st January at a cost of Rs. 15,000 and the same stock is to be maintained throughout

(*e*) Trade creditors will be paid on the last day of the month in which the goods are bought. Payments for all sales will be received on the last day of the month after the one in which the goods are sold.

You are required

(1) to estimate the minimum capital required by the new company for the first 6 months,

(assume that there will be no borrowings during the period)

(2) to prepare an income statement for the 6 months ending on 30th June 1980 after providing for depreciation on machinery and furniture at 10% per annum, and

(3) to prepare the balance sheet as on 30th June 1980

Solution

(1) CASH BUDGET FOR THE PERIOD

January to June 1980

Receipts	*January* Rs.	*February* Rs	*March* Rs.	*April* Rs.	*May* Rs.	*June* Rs	*Total* Rs
Collection from debtors	—	60,000	60,000	60,000	60,000	60,000	3,00,000
Total receipts	—	60,000	60,000	60,000	60,000	60,000	3,00,000
Payments :							
Assets	80,000	—	—	—	—	—	80,000
Creditors	55,000	40,000	40,000	40,000	40,000	40,000	2,55,000
Overheads	10,000	10,000	10,000	15,000	10,000	10,000	65,000
Total payments	1,45,000	50,000	50,000	55,000	50,000	50,000	4,00,000
Surplus/ deficit	(1,45,000)	10,000	10,000	5,000	10,000	10,000	(1,00,000)

The minimum capital needed should equal the maximum of cash deficit during the budget period. Therefore, Srivatsasa Limited requires a minimum capital of Rs. 1,45,000 and that amount has to be raised by 1st January, 1980

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Incentive bonus	2,000	—	—
Non-trading payments			
Advance income-tax	—	—	5,000
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(3) to prepare the balance sheet as on 30th June 1980

Solution

(1) CASH BUDGET FOR THE PERIOD

January to June 1980

Receipts	*January* Rs.	*February* Rs.	*March* Rs.	*April* Rs	*May* Rs.	*June* Rs	*Total* Rs
Collection from debtors	—	60,000	60,000	60,000	60,000	60,000	3,00,000
Total receipts	—	60,000	60,000	60,000	60,000	60,000	3,00,000
Payments :							
Assets	80,000	—	—	—	—	—	80,000
Creditors	55,000	40,000	40,000	40,000	40 000	40,000	2,55,000
Overheads	10,000	10,000	10,000	15,000	10,000	10,000	65,000
Total payments	1,45,000	50,000	50,000	55,000	50,000	50,000	4,00,000
Surplus/ deficit	(1,45,000)	10,000	10,000	5,000	10,000	10,000	(1,00,000)

The minimum capital needed should equal the maximum of cash deficit during the budget period. Therefore, Srivatsasa Limited requires a minimum capital of Rs. 1,45,000 and that amount has to be raised by 1st January, 1980

(2) BUDGETED INCOME STATEMENT

for the six months ending 30th June 1980

To Purchases	Rs. 2,55,000	By Sales	Rs. 3,60,000
To Gross profit c/d	1,20,000	By Closing stock	15,000
	Rs. 3,75,000		Rs. 3,75,000
To Overhead expenses	65,000	By Gross profit b/d	1,20,000
To Depreciation :			
To Machinery	1,250		
To Furniture	250		
To Surplus	53,500		
	Rs. 1,20,000		Rs. 1,20,000

Srivatsasa Limited

(3) BUDGETED BALANCE SHEET

as on 30-6-1980

Capital	Rs. 1,45,000	Buildings		Rs 50,000
Surplus	53,500	Machinery	25,000	
		Less Depreciation	1,250	
				23,750
		Furniture	5,000	
		Less Depreciation	250	
				4,750
		Stock		15,000
		Debtors		60,000
		Cash		45,000
	Rs. 1,98,500			Rs. 1,98,500

Tutorial Notes

(1) *Cash balance.*

Capital raised on 1-1-1980		Rs. 1,45,000
Add : Cash receipts		3,00,000
	Total	4,45,000
Less : Cash payments		4,00,000
	Balance as on 30-6-1980	Rs. 45,000

(2) *Debtors* :

Amount in respect of June sales will be received only in July. Therefore, debtors figure will be Rs. 60,000.

2. **The Adjusted Profit and Loss Method.** The budgeting done on this basis is known as cash-flow statement. While receipts and payments method is quite suitable for short-term forecasting, cash flow method is relatively more suitable for long-term forecasting as it is devoid of unnecessary details. Under this system profit is taken as equivalent to cash and then adjustment is made in respect of non-cash transactions such as depreciation, amounts written off, accrued and outstanding items and change in working capital. That determines cash generated from operations. In other words, the revenue account by a process of reversal is

converted from accrual (mercantilistic) basis to cash basis, so as to find out cash generated from operations. Then other usual items like capital *receipts, capital payments, dividends, etc., are considered to estimate the* total receipts, total payments and the resulting cash surplus or deficit for the period. Cash-flow statements can be prepared with respect to a past or future period. In the latter case one needs a budgeted profit and loss account and budgeted balance sheet to prepare this statement. The technique of preparing a cash-flow statement follows.

3. **The Balance Sheet Method.** Under this method cash is taken as the balancing figure of the budgeted balance sheet. All the items other than cash are estimated. If the total of liabilities (including capital) is [illegible] is taken to be the cash balance. [illegible] without cash is more than the [illegible] cash deficit and balanced by the item bank overdraft.

STATEMENT OF CASH-FLOW

A cash-flow statement is not very much different from a 'funds-flow statement' which we have discussed in the previous chapter. While in the preparation of funds-flow statement the sources and uses of all 'funds' are taken into account, in the preparation of cash-flow statement we restrict ourselves strictly to sources and uses of cash alone and even a most liquid current asset like book debts is excluded for the purpose. Since the idea of preparing the cash-flow statement is to show the impact of various transactions on the cash position of a firm, it takes into account only transactions immediately resulting in cash inflows and cash outflows. In simple words, a cash-flow statement shows the sources of cash receipts and the purposes for which payments are made, thus explaining the changes in the cash balances of the business.

The Approach. The preparation of *cash flow statement involves the* following steps :

(*a*) Calculation of cash flows related to operations, and

(*b*) Calculation of cash flows on account of other transactions.

Both the above steps have been explained with the help of illustrations.

A—CASH FROM OPERATION

(1) When all transactions are cash transactions

C[illegible] an important source but also a [illegible] understood with the help of an [illegible]

Sales		Rs. 1,00,000
Less : Purchases	Rs 30,000	
Wages	20,000	
Rent	1,000	
Salaries	5,000	
		56,000
Net profit		Rs. 44,000

In the above case the profit from operation is Rs. 44,000. If it is assumed that all sales are cash sales, and all payments (*i.e.*, for purchases, wages, rent and salaries) are cash payments then *net* cash inflow is also Rs. 44,000. Because cash sales must have resulted in an inflow of cash of Rs. 1.00.000 and payments must have resulted in an outflow of cash of Rs. 56,000 thus leaving a net cash balance of Rs. 44,000. In this case, thus net profit has resulted in an equivalent amount of cash resource. Thus the above deviation may be expressed in terms of equation as under :

Net cash from operation = Net profit

(2) When all transactions are not cash transactions

The above result is based on a strict condition that all transactions are *cash* transactions. This condition is hardly satisfied in actual practice. It is often found that a part of sales are credit sales ; some purchases are credit purchases ; a few expenses are always outstanding to some extent, all incomes do not realise immediately. Under such circumstances, the net profit made by a firm *cannot* generate equivalent amount of *cash*. All these points are now taken one by one here-under :

(*a*) **Effect of credit sales.** In the example given on page FSA-192 if it is assumed that out of the sales of Rs. 1,00,000, Rs. 30,000 are locked up with customers on account of credit sales, then it is easy to calculate the net cash inflow as follows :

Cash inflow from sales (Rs. 1,00,000—Rs. 30,000)		Rs. 70,000
Less Cash outflow :		
Purchases (all cash)	30,000	
Wages (all cash)	20,000	
Rent (all cash)	1,000	
Salaries (all cash)	5,000	
		56,000
Net cash inflow		Rs. 14,000

It will be now seen that although profit remains the same, *i.e.*, Rs. 44,000 (because credit sales do not reduce the profit) the cash generated from the operation is reduced from Rs. 44,000 to Rs. 14,000. It should, thus, be clear to the reader that net profit need not generate equivalent amount of cash.

Alternative solution. Cash from operation as given in the above case can also be calculated in a different way :

Net profit from operation	Rs. 44,000
Less Debtors at the end	30,000
Cash from operation	Rs. 14,000

The whole philosophy can now be expressed in terms of the following equation.

Net Source = Net profit—Debtors at the end

Corollary to the above rule is that the amount of debtors appearing in the opening balance sheet is added to the net profit made during the year. This is based on a simple assumption that the debtors outstanding at the beginning of the year are collected during the year and result in cash inflow in addition to cash inflow on account of net profit less debtors at the end. Thus the equation of net source from operation is now :

Cash from operation = Net profit—Debtors at the end + Debtors at the beginning*

From the rule enunciated above we can derive a simpler rule for the purpose of easy calculation. If debtors at the end are less than the debtors at the beginning the cash from operations will be more than the net profit by the amount of decrease in debtors.

Illustration 3. From the following information calculate the cash from the operations as on 31-12-1979.

	Rs.
Net Profit for 1979	70,000
Debtors on 1-1-1979	30,000
Debtors on 31-12-1979	20,000

Solution.

Net Profit for the year	70,000
Add Debtors at the beginning	30,000
	1,00,000
Less Debtors at the end	20,000
Cash from operations	80,000
Alternatively	
Net Profit for the year	70,000
Add Decrease in the debtors (Rs. 30,000—Rs. 20,000)	10,000
Cash from operations	80,000

Similarly, if there is an increase in the debtors the same must be added to the net profit for arriving at cash from operations. Thus the formula can be restated as under :

* The word 'debtors' is used in a liberal sense and includes bills receivable and prepaid expenses.

Cash from operation = Net Profit	+Decrease in debtors or —increase in debtors	

A student is also free to show the increase (or decrease) in debtors as a separate item in the flow statement. In such a case decrease in debtors will come as a cash inflow and increase in debtors as a cash outflow.

Effect of opening and closing stocks

Opening stock (as it appears on the debit side of profit and loss account) reduces profit made during the year without reducing the cash balance. Closing stock increases the profit made during the year without increasing the cash balance. Thus cash generated from the profit can be calculated by adding the opening stock to and deducting the closing stock from the net profit. This is clear from the following illustration :

Illustration 4. Calculate cash generated from operation :

PROFIT AND LOSS ACCOUNT

To Opening stock	Rs. 5,000	By Sales (cash)	Rs. 1,00,000
To Purchase (cash)	78,000	By Closing stock	8,000
To Profit	25,000		
	Rs. 1,08,000		Rs. 1,08,000

Solution.

Alternative 1.

Cash from sale of goods	Rs. 1,00,000
Less Payments—purchases	78,000
Cash from operation	Rs. 22,000

Alternative 2. Cash from operation can be calculated after taking the figure of net profit as a starting point.

Net profit	Rs. 25,000
Add Opening stock	5,000
	30,000
Less Closing stock	8,000
Cash from operation	Rs. 22,000

Alternative 3. Instead of adding opening stock to and deducting the closing stock from the net profit, the *increase* in stock can be *deducted* from the net profit for calculating cash from operation. The result will be as follows :

Net profit	Rs. 25,000
Less : Increase in stock (Rs. 8,000 − Rs. 5,000)	3,000
Cash from operation	Rs. 22,000

When increase in stock is deducted, the decrease in stock should be added for calculating the amount of cash from operation. Thus the following formula may be derived :

> **Cash from operation = Net profit** + Decrease in stock or − Increase in stock

After taking into consideration the combined effect of credit sale and stock balances, the cash from operation can be calculated as under :

> **Cash from operation = Net profit** + Decrease in stock + Decrease in debtors or − Increase in stock − Increase in debtors

Effect of credit purchases

Since purchases made during the year are shown on the debit side of profit and loss account, they reduce the profit made during the year. If all purchases are cash purchases then they reduce the cash balance also. If some purchases are on account then cash of the business is not reduced to that extent. In order to calculate cash from operation the payment outstanding as on the last date of the financial year on account of credit purchase is added to the net profit made during the year. Since outstanding payments on account of credit purchases are shown as creditors in the closing balance sheet, it can be said that cash from operation can be calculated by adding creditors at the end to the net profit made during the year.

Opening creditors are paid during the current year and thus result in the outflow of cash without reducing the profit made during the year. Therefore, for calculating cash from operation creditors in the beginning are deducted from the net profit. Now formula can be written as under ;

> **Csh from operation = Net profit + Closing balance of creditors − Opening balance of creditors**

Illustration 5. From the following, calculate the cash generated from operation :

PROFIT AND LOSS ACCOUNT
for the year ended December 31, 1979

To Opening stock	Rs. 8,000	By Sales	Rs. 3,00 000
To Purchases	2,32,000	By Stock at the end	15,000
To Gross profit	75,000		
	Rs. 3,15,000		Rs. 3,[illegible]

	December 31	
	1978	*1979*
Balances		
Debtors	17,000	6,000
Creditors	10,000	13,000

Solution :

Alternative 1.

Net profit	Rs. 75,000
Less : Increase in stock (Rs. 15,000 — Rs. 8,000)	7,000
	68,000
Add : Decrease in debtors (Rs. 17,000 — Rs. 6,000)	11,000
	79,000
Less : Opening creditors	10,000
	69,000
Add : Closing creditor	13,000
Net cash inflow from operation	Rs. 82,000

Alternative 2.

If, instead of adding closing creditors to and deducting opening creditors from the net profit, the increase in creditors Rs. 3,000 is added to the net profit then again the same result is arrived at. Thus, the following formula can be derived :

$$\text{Cash from operation} = \text{Net profit} \begin{array}{l} + \text{ Increase in creditors} \\ \quad\text{or} \\ - \text{ Decrease in creditors} \end{array}$$

After considering the effects of stocks, debtors and creditors the cash from operation can be calculated with the help of the following formula :

$$\text{Cash from operation} = \text{Net profit} \begin{array}{l} + \text{ Decrease in stock} \\ + \text{ Decrease in debtors} \\ + \text{ Increase in creditors} \\ \quad\text{or} \\ - \text{ Increase in stock} \\ - \text{ Increase in debtors} \\ - \text{ Decrease in creditors} \end{array}$$

Outstanding expenses. The balance of expense outstanding account is considered to adjust the profit made during the year for calculating cash flow from operation. Opening balance of expense outstanding is deducted from and the closing balance of expense outstanding is added to the profit made during the year. This is based on the logic that liability on account of opening balance of expense outstanding is paid during the year and thus reduces the cash generated from operation. The closing balance of expense outstanding is added to expense paid account for calculating expense for the purpose of profit and loss account. This reduces the profit made

during the year. Since this is still outstanding, it does not reduce the cash balance. Hence, it is added to the profit made during the year. Thus, *all expenses outstanding in the beginning are deducted from and those at the end are added to the profit made during the year.* Now the equation takes the following form :

Cash from operation = Net profit	– Decrease in outstanding expenses or + Increase in outstanding expenses

If expense outstanding in the beginning is Rs. 10,000 and that at the end is Rs. 8,000, then Rs. 10,000 will be deducted from and Rs. 8,000 added to the net profit. Alternatively, if the decrease in expense outstanding Rs. 2,000 (*i.e.*, Rs. 10,000 - Rs 8,000) is deducted from the profit then the same result can be achieved. Thus, it can be said that decrease in outstanding expenses is deducted from and increase in outstanding expenses is added to the profit for calculating cash from operation.

After considering the effect of stock, debtors, creditors, outstanding expenses, cash from operation can be calculated with the help of the following *formula* :

Cash from operation = Net profit	+ Decrease in stock + Decrease in debtors + Increase in creditors + Increase in outstanding expenses or – Increase in stock – Increase in debtors – Decrease in creditors – Decrease in outstanding expenses

Expenses paid in advance

Expenses paid in advance are treated in the way debtors are treated. Expense paid in advance at the end of the year does not reduce the profit calculated on accrual basis but reduces the cash balance. It is, therefore, deducted from the profit made during the year Likewise prepaid expenses at the beginning of the year will increase the cash balance without reducing the net profit. This is because this amount represents current expense paid during the previous period Hence the opening balance of prepaid expense account is added to the net profit made during the year.

If prepaid expense *in the beginning* is Rs 9,000 and that at the end Rs. 5,000 then Rs. 9,000 will be added and Rs 5,000 will be deducted from the profit. Alternatively, the decrease in prepaid expense Rs 4,000 (*i.e.*, Rs. 9,000 – Rs 5,000) can be added to achieve same result. Thus, it can be said in terms of formula as under :

Cash from operation = Net profit	+ Decrease in prepaid expenses or – Increase in prepaid expneses

After considering the effect of stock, debtors, creditors, outstanding expenses and prepaid expenses, cash from operation can be calculated with the help of the following formula :

Cash from operation = Net profit	**+ Decrease in stock** **+ Decrease in debtors** **+ Decrease in prepaid expenses** **+ Increase in creditors** **+ Increase in outstanding expenses** **or** **— Increase in stock** **— Increase in debtors** **— Increase in prepaid expenses** **— Decrease in creditors** **— Decrease in outstanding expenses**

Accrued income and income received in advance

Accrued income is a current asset. Its treatment is like that of debtors. Decrease in accrued income is added to and increase in accrued income is deducted from the profit.

Income received in advance is a current liability. Its treatment is like that of creditors. Decrease in income received in advance is deducted from and increase is added to the net profit made during the year.

After considering the effect of stock, debtors, creditors, outstanding expenses, accrued incomes and incomes received-in-advance cash from operation can be calculated with the help of the following formula :

Cash from operation = Net profit	+ *Decrease in stock* + *Decrease in debtors* + *Decrease in prepaid expenses* + *Decrease in accrued income* + **Increase in creditors** + **Increase in outstanding expenses** + **Increase in income received in advance** or — *Increase in stock* — *Increase in debtors* — *Increase in prepaid expenses* — *Increase in accrued income* — **Decrease in creditors** — **Decrease in outstanding expenses** — **Decrease in income received-in-advance**

A careful examination of the above formula reveals that words printed in italics are current assets and those in bold type are current liabilities. Now, the same formula can be restated as under :

Cash from operation = Net profit	+ Decrease in current assets + Increase in current liabilities or — Increase in current assets — Decrease in current liabilities

Illustration 6. From the following balances you are required to calculate the cash from operation :

	December 31 1978	December 31 1979		December 31 1978	December 31 1979
Debtors	Rs 50,000	47,000	Prepaid expenses	Rs. 800	700
Bills receivable	10,000	12,500	Accrued income	600	750
Creditors	20,000	25,000	Income received in advance	300	250
Bills payable	8,000	6,000	Profit made during the year	—	1,30,000
Outstanding expenses	1,000	1,200			

Solution :

Profit made during the year			Rs. 1,30,000
Add Decrease in current assets :			
Debtors	3,000		
Prepaid expenses	100		
		3,100	
Add Increase in current liabilities :			
Creditors	5,000		
Outstanding expenses	200		
		5,200	
			8,300
			1,38,300
Less Increase in current assets :			
Bills receivable	2,500		
Accrued income	150		
		2,650	
Less Decrease in current liabilities :			
Bills payable	2,000		
Income received in advance	50		
		2,050	
			4,700
Cash from operation			Rs 1,33,600

CALCULATION OF OPERATING PROFIT

In case profit/loss disclosed by the profit and loss account includes non-operating incomes, *e.g.*, dividend, rent or non-operating expenses, *e.g.*, compensation, then these are first deducted from or added to the profit [illegible] [illegible] [illegible] are shown separately as inflows and outflows of cash respectively.

Deleting the effect of non-cash items

It is often seen that quite a few expenses do not result in outflow of cash : (*i*) depreciation on fixed assets. (*ii*) amortization of intangible assets, *e.g.*, goodwill, trade mark, patent rights ; (*iii*) amortization of deferred expenses, *e.g.*, preliminary expenses, discount on the issue of shares and debentures. Under such circumstances cash generated by the firm is more than the profit made by the firm during the year. Th se

items are taken one by one to facilitate the understanding of mechanics of calculation of cash from the given net profit/loss.

Depreciation. Depreciation on fixed assets is shown on the debit side of profit and loss account. This reduces the profit made during the year without reducing the cash balance (since depreciation is a non-cash transaction). In order to find out cash generated from operation, depreciation is *added* to the profit made during the year.

Amortization of intangible assets. Non-current assets like goodwill, patent rights, trade marks are written off over the number of years according to the policy pursued by the management. These items reduce the profit made during the year without reducing the cash balance of the firm. They are *added* back to the profit made during the year for calculating the cash generated from operation.

Amortization of deferred expenses. Preliminary expenses, discount on the issue of shares and debentures, heavy amount of advertisement are shown, in the first instance, in the balance sheet. Afterwards they are charged to profit and loss account in instalments. When they are charged to profit and loss account they reduce profit of the year without affecting the cash balance. For calculating the cash generated from operation such items are *added* back to the profit made during the year.

Gains on sale of fixed assets. Gains made on the sale of fixed assets are taken to the credit side of profit and loss account. Thus, they, increase the profit made during the year. The cash generated from operation is calculated after *reducing* the profit made during the year by the amount equal to gains on sale of fixed assets.

Proceeds on the sale of fixed assets are treated as source of cash separately. This has been done later in the chapter.

Loss on the sale of fixed assets. Loss on the sale of fixed assets is *added* to the profit made during the year in order to adjust the figure of profit as reduced by the loss on sale of fixed assets, so that it can disclose the cash generated from operation. Net proceeds from the sale of fixed assets are regarded as sources of cash separately.

Provision for doubtful debts and discount on debtors. For calculating the source from operation such provisions are *added* to the profit made during the year. This is based on the logic that such provisions reduce the profits made during the year without reducing the cash position of the company.

Creation of reserves. If profit made during the year has been used for creating reserves or funds such as general reserve, capital redemption reserve account, debenture sinking fund, dividend equalisation reserve, development rebate reserve, insurance fund, any type of compensation fund and the amount of profit as reduced by these transfers has been given, then it is necessary to calculate the profit made during the year without being affected by such transfers. This is done by *adding* the amount so transferred to these reserves to the figure of profit given to us.

Illustration 7. From the following balances you are required to calculate the flow of cash on account of (*i*) operation ; (*ii*) debtors ; and (*iii*) bills receivable :

	December 31 1978	December 31 1979		December 31 1978	December 31 1979
Balance of profit and loss account Rs	6,000	5,500	Development rebate reserve account	Rs. 70,300	72,500
Balance of debtors	8,700	5,000	Salary outstanding	3,000	1,200
Balance of bills receivable	6,200	10,300	Wages prepaid	500	700
General reserve	20,200	23,700	Goodwill	8,000	7,000

Solution.

(*i*) *Calculation of profit made during the year* :

PROFIT AND LOSS ACCOUNT

To General reserve (Rs. 23,700—Rs 20,200)	Rs 3,500	By Opening balance	Rs. 6,000
To Development rebate reserve (Rs 72,500—Rs. 70,300)	2,200	By Profit made during the year (balancing figure)	6,200
To Goodwill (Rs 8,000—Rs 7,000)	1,000		
To Closing balance	5,500		
	Rs 12,200		Rc. 12,200

(*ii*) *Calculation of cash from operation* :

Profit made during the year			6,20
Add Decrease in current assets : debtors			3,70
			9,900
Less Increase in current assets :			
Bills receivable	4,100		
Wages	200		
		4,300	
Less Decrease in current liabilities :			
Salary outstanding		1,800	
			6,100
Cash from operation			Rs. 3,800

Note. When profit made during the year is not given, instead balances in the beginning and at the end are given, then in order to calculate profit made during the year profit and loss adjustment account is prepared In such cases, transfers to various reserves and provisions are shown on the debit side of profit and loss account. *The balancing figure is the profit made during the year*

Illustration 8. G. Rayon Corporation made the profit of Rs 3,70,250 after considering the following :

(*i*) Depreciation on fixed assets Rs. 7,500 ;

(*ii*) Amortization of development cost Rs. 5,000 ;

(*iii*) Loss on sale of a machine Rs. 600 ;

(*iv*) Provision for doubtful debts Rs 1,200 ; Provision for taxation Rs. 50,000 :

(*v*) Transfer to general reserve Rs. 20,000 ;

(*vi*) Gain on sale of fixed assets Rs. 2,500.

The following additional information is given to you :

	December 31 1978	December 31 1979		December 31 1978	December 31 1979
Creditors	Rs. 20,000	25,000	Debtors	Rs. 36,000	39,000
Bills payable	15,000	13,000	Bills receivable	12,000	10,500
Outstanding expenses	7,000	6,000	Prepaid expenses	1,600	1,700

You are required to determine the cash from operation.

Solution.

(*i*) *Adjustment of profit* :

Profit made during the year			Rs. 3,70,250
Add Non-cash items :			
Depreciation on fixed assets		7,500	
Amortization of development cost		5,000	
Loss on sale of machine		600	
Provision for doubtful debts		1,200	
Provision for tax		50,000	
Transfer to general reserve		20,000	84,300
			4,54,550
Less Gain on sale of fixed assets			2,500
Profit			Rs. 4,52,050

(*ii*) *Calculation of cash from operation* :

Profit as per (*i*) above			4,52,050
Add Decrease in current assets :			
Bills receivable		1,500	
Add Increase in current liability :			
Creditors		5,000	6,500
			4,58,550
Less Decrease in current liabilities :			
Bills payable	2,000		
Outstanding expenses	1,000	3,000	
Less Increase in current assets :			
Debtors	3,000		
Prepaid expenses	100	3,100	6,100
Cash from operation			Rs. 4,52,450

B—CASH FROM NON-CURRENT ITEMS

So far we have seen the flow of cash from operation which took into consideration profit and loss account items and current assets and current liabilities. Under this heading it is proposed to consider the flow

of cash on account of non-current items like fixed assets and fixed liabilities.

(i) *Sale of fixed assets.* Sale of fixed assets, unless otherwise stated, is assumed to be on cash terms. This increases the cash balance of the firm. It is termed as 'inflow' of cash.

(ii) *Issue of shares or debentures for cash.* When shares or debentures are issued for cash, cash of the firm increases. Thus, there are other 'inflows' of cash.

(iii) *Purchase of fixed assets* Unless otherwise stated purchases of fixed assets are assumed to be on cash terms. These purchases reduce the cash balance of the firm and are termed as 'outflows' of cash.

(iv) *Redemption of debentures or redeemable preference shares.* These result in the outflow of cash. Redemption of debentures by converting them into new debentures or shares does not result in an outflow of cash.

(v) *Payment of dividend and tax.* These reduce the cash balance of the firm and are 'outflows' of cash.

C—PREPARATION OF CASH FLOW STATEMENT

Cash flow statement is normally prepared in the "Report form Reconciling Type". In this case balance in the beginning is taken as a starting point; to this all sources of cash are added and from the total all applications of cash are deducted. This gives the closing balance of cash [illegible]

CASH FLOW STATEMENT

Cash was provided by		Rs.
Operation		...
Issuance of share capital		...
Issuance of debentures		...
Sale of investment		...
Sale of fixed assets		...
Total		Rs. ...
Cash was applied to		
Acquisition of plant and equipment	...	
Decrease of short-term bank loan	...	
Payment of long-term loan	...	
Payment of dividend	...	
Total		...
Increase (or decrease) in cash balance		Rs. ...

If this is done, the increase (or decrease) in cash balance can be [illegible] fied by calculating the difference of opening and closing balances of

D – SUMMARY

A cash flow statement summarises the changes in cash position of the firm. Transactions which increase the cash position of the company are labelled as 'inflows' of cash and those which decrease the cash position as 'out flows' of cash. Sources of cash are : (*i*) operation ; (*ii*) sale of fixed assets for cash : and (*iii*) issue of shares or long-term loans for cash. Uses of cash include : (*i*) operation : (*ii*) purchase of fixed assets for cash ; (*iii*) redemption of redeemable preference shares ; (*iv*) redemption of long-term loan and debentures ; (*v*) payment of dividend ; and (*vi*) payment of tax. In order to prepare cash flow statement the following procedure is suggested.

(*a*) Calculate profit/loss made during the year after : (*i*) adding back non-cash expenses, *e g* , depreciation on fixed assets ; (*ii*) adding back the amortized portion of intangible assets, *e.g.*, goodwill, and deferred revenue expenses, *e.g.*, preliminary expenses.

(*b*) Calcul-te cash from operation' (1) by adding to the profit as per (*a*) : (1) Decrease in current assets ; and (*ii*) Increase in current liabilities ; (2) by subtracting therefrom : (*i*) Increase in current assets ; and (*ii*) Decrease in current liabilities.

(*c*) Calculate inflows and outflows of cash on account of (*i*) fixed assets ; and (*ii*) fixed liabilities.

(*d*) Prepare statement of cash flow. For this take opening cash balance ; add to it inflows of cash ; deduct therefrom the outflows of cash. The amount left is the closing balance of cash in hand.

One can also make use of the funds flow statement to show the changes in cash balance. Under this method instead of showing the increase or decrease in the working capital as a single figure, the changes in each of the current assets (other than cash) and current liabilities are separately considered. This would automatically give the change occurring in the cash balance. This method is illustrated by giving alternate solution to illustration 13.

E—SOLVED PROBLEMS

Illustration 9. From the following balance sheets of *X* Ltd as on December 31, 1978 and 1979 you are required to prepare statement of cash flow :

Liabilities		*1978*	*1979*	*Assets*		*1978*	*1979*
Share capital	Rs.	80,000	85,000	Land and building	Rs.	50,000	50,000
Profit and loss appropriation account		14,500	24,500	Plant		24,000	34,000
Creditors		9,000	5,000	Stock		9,000	7,000
Mortgage		—	5,000	Debtors		16,500	19,500
				Cash at bank		4,000	9,000
	Rs.	1,03,500	1,19,500		Rs.	1,03,500	1,19,500

Solution :

(*i*) *Calculation of profit made during the year.* In the absence of any other information increase in profit and loss account balance has been taken as profit made during the year. In this case it is Rs. 10,000 (*i e.*, Rs. 24,500 – Rs. 14,500).

(*ii*) *Calculation of cash from operation after considering changes in current assets and current liabilities* :

Profit made during the year		Rs. 10,000
Add : Decrease in current assets : stock		2,000
		12,000
Less : Increase in current assets : Debtors (Rs 19,500 – 16,500)	3,000	
Less : Decrease in current liabilities : Trade creditors (Rs. 9,000 – Rs. 5,000)	4,000	
		7,000
Cash from operation		5,000

(*iii*) STATEMENT OF CASH FLOW

Cash balance as on January 1, 1979		Rs. 4,000
Add inflows :		
Operation	5,000	
Issue of shares	5,000	
Mortgage (loan on mortgage)	5,000	
		15,000
		19,000
Less outflows :		
Purchase of plant		10,000
Cash balance as on December 31, 1979		Rs. 9,000

Illustration 10. Balance sheets of M/s. Ram and Shyam as on 1st January, 1976 and 31st December, 1976 were as follows :

BALANCE SHEETS

	1-1-1976	*31-12-1976*
Assets :	Rs.	Rs.
Cash	10,000	7,000
Debtors	30,000	50,000
Stock	35,000	25,000
Machinery	80,000	55,000
Land	40,000	50,000
Buildings	35,000	60,000
	Rs. 2,30,000	

Liabilities :		
Creditors	40,000	44,000
Mrs. Ram's loan	25,000	—
Loan from P.N. Bank	40,000	50,000
Capital	1,25,000	1,53,000
Rs.	2,30,000	2,47,000

During the year a machine costing Rs. 10,000 (accumulated depreciation Rs. 3,000) was sold for Rs. 5,000. The balance of provision for depreciation against machinery as on 1st January, 1976 was Rs. 25,000 and on 31st December, 1976 Rs. 40,000. Net profit for the year 1976 amounted to Rs. 45,000.

You are required to prepare cash flow statement after giving necessary working notes. **(M. Com. Rajasthan May, 1977)**

Solution :

(*i*) Cash from operations :

	Rs.
Net profit as given	45,000
Add : Loss on sale of machinery	2,000
: Depreciation	18,000
: Decrease in stocks	10,000
: Increase in creditors	4,000
	79,000
Less : Decrease in debtors	20,000
Cash from operations Rs.	59,000

(*ii*) Statement of cashflow :

	Rs.	Rs.
Cash balance as on 1-1-1976		10,000
Add : Inflows of cash		
Cash from operations	59,000	
Sale of machinery	5,000	
Loan from P.N. Bank	10,000	
Total cash available for use		74,000
		84,000
Less : Outflows of cash		
Payment of Mrs. Ram's loan	25,000	
Proprietor's drawings	17,000	
Purchase of land	10,000	
Purchase of buildings	25,000	
		77,000
Cash balance as on 31-12-1976		7,000

Tutorial Notes (1) **PROVISION FOR DEPRECIATION**

	Rs		Rs.
To Machinery disposal a/c	3,000	*1-1-76* By Balance b/d	25,000
31-12-1976 To Balance c/d	40,000	By Profit and loss a/c (balancing figure)	18,000
Rs.	43,000	Rs.	43,000

(2) **MACHINERY ACCOUNT**

	Rs.		Rs.
1-1-76 To balance b/d	1,05,000	By Machinery disposal a/c	10,000
		31-12-76 By Balance c/d	95,000
Rs.	1,05,000	Rs.	1,05,000

(3) **MACHINERY DISPOSAL ACCOUNT**

	Rs.		Rs.
To Machinery account	10,000	By Provision for depreciation account	3,000
		By Cash	5,000
		By Profit and loss account	2,000
Rs.	10,000	Rs.	10,000

Illustration 11. At January 1, 1979 and December 31, 1979, the Fair Fleet had statements of financial position as follows :

	1-1-79 (in '00)	*31-12-79 (in '00)*		*1-1-79 (in '00)*	*31-12-1979 (in '00)*
Accounts payable Rs.	85	40	Cash Rs.	250	400
Owners' equity	6,265	6,120	Accounts receivable	150	100
			Supplies	50	10
			Equipment (after depreciation)	900	850
			Building (after depreciation)	5,000	4,800
Rs.	6,350	6,160	Rs.	6,350	6,160

[illegible] during the year, [illegible] no change took [illegible] preciation [illegible] funds statement for cash changes.

Solution : **STATEMENT OF CASH FLOW**

For the year ended December 31, 1979

		(in '00)
Cash balance, January 1, 1979		Rs. 250
Add Inflows of cash :		
From Operation (1)	Rs. 105	
Decrease in customers balance (Rs. 150 — Rs. 100)	50	
Decrease in supplies	40	
		195

See next page.

Total cash available for use	445
Less outflows of cash :	
Decrease in accounts payable (Rs. 85—Rs. 40)	45
Cash Balance, December 31, 1979	Rs. 400

Tutorial Notes

(1) Source of cash from operation has been arrived at as follows :

Sales		Rs. 21,850
Less : Cost of goods sold (2)		21,995
Loss from operation		145
Less : Non-cash items :		
Depreciation—Equipment	50	
—Building	200	
		250
Cash from operation		Rs. 105

(2) Payment for expenses has not been given in the question. But by comparing the capitals in the beginning and at the end it has been found that capital in the beginning has been reduced by Rs. 145. In the absence of any information regarding withdrawal of capital it is reasonable to assume that this reduction is due to loss. Loss is possible only when expenses exceed sales by Rs. 145. Hence, cost of goods sold is Rs. 21,850+Rs. 145=Rs. 21,995.

Illustration 12. The following are the summarised balance sheets of *XYZ* Ltd as on March 31, 1979 and 1980 :

	1979	*1980*		*1979*	*1980*
7% Redeemable preference shares Rs.	—	10,000	Fixed assets Rs.	41,000	40,000
Equity shares	40,000	40,000	*Less* : Depreciation	11,000	15,000
	40,000	50,000		30,000	25,000
General reserve	2,000	2,000	Debtors	20,000	24,000
Profit and loss account	1,000	1,200	Stock	30,000	35,000
Debentures	6,000	7,000	Prepaid expenses	300	500
Creditors	12,000	11,000	Cash	1,200	3,500
Provision for taxation	3,000	4,200			
Proposed dividend	5,000	5,800			
Bank overdraft	12,500	6,800			
Rs.	81,500	88,000	Rs.	81,500	88,000

You are required to prepare a statement of cash flow.

Solution :

(i) *Calculation of adjusted profit* :

	Rs.
Difference in profit and loss account balances (Rs. 1,200—Rs. 1,000)	200
Add : Provision for taxation	4,200
Proposed dividend	5,800

Depreciation (Rs. 15,000—Rs. 11,000)			4,000
Profit made during the year		Rs.	14,200

(*ii*) *Calculation of cash from operation* :

Profit made during the year		Rs.	14,200
Less : Increase in current assets :			
Debtors	Rs. 4,000		
Stock	5,000		
Prepaid expenses	200		
Less : Decrease in current liabilities :			
Creditors	1,000		
			10,200
Cash from operation		Rs.	4,000

Tutorial Notes 1. *Provision for tax and proposed dividend in 79-80 are added to* profit, being only appropriation of profits.

2. *In the absence of any other information, it has been assumed that tax* and dividend for the previous year have been paid in the current year. They are just equal to the amount of provision for tax and proposed dividend respectively.

3. The fixed assets at cost have gone down from Rs 41,000 in 78-79 to Rs. 40,000 in 79-80. It has been assumed that this reduction is due to sale of asset resulting in neither gain nor loss.

(*iii*) STATEMENT OF CASH FLOW

Cash in hand as on 31st March 1979		Rs.	1,200
Add : *Inflows of cash* :			
Operation	Rs. 4,000		
Issue of redeemable preference shares	10,000		
Issue of debentures	1,000		
Sale of fixed assets (Rs. 41,000—40,000)	1,000	Rs.	16,000
			17,200
Less outflows of cash :			
Payment of dividend	5,000		
Payment of tax	3,000		
Payment of bank overdraft	5,700		13,700
Cash in hand as on 31st March, 1980		Rs.	3,500

Illustration 13. From the following balance sheets of *A* Ltd make out the statement of cash flow :

Liabilities	*1979* Rs	*1980* Rs	*Assets*	*1979* Rs.	*1980* Rs.
Equity share capital	3,00,000	4,00,000	Goodwill	1,15,000	90,000
8% Redeemable preference shares	1,50,000	1,00,000	Land and buildings	2,00,000	1,70,000
			Plant	80,000	2,00,0[illegible]

General reserve	40,000	70,000	Debtors	1,60,000	2,00,000
Profit and loss account	30,000	48,000	Stock	77,000	1,09,000
Proposed dividend	42,000	50,000	Bills receivable	20,000	30,000
Creditors	55,000	83,000	Cash in hand	15,000	10,000
Bills payable	20,000	16,000	Cash at bank	10,000	8,000
Provision for taxation	40,000	50,000			
Rs.	6,77,000	8,17,000	Rs.	6,77,000	8,17,000

Additional information: (*i*) Depreciations of Rs. 10,000 and Rs. 20,000 have been charged on plant account and land and buildings account respectively in 1980 ; (*ii*) An interim dividend of Rs. 20,000 has been paid in 1980 ; (*iii*) Income tax Rs. 35,000 was paid during the year 1980.

Solution :

(*i*) *Calculation of profit made during the year* :

Closing balance of profit and loss account		Rs. 48,000
Add : Profits used for reserves and provisions :		
Proposed dividend	50,000	
Interim dividend	20,000	
Provision for tax	45,000	
General reserve (Rs. 70,000—40,000)	30,000	
		1,45,000
		1,93,000
Add : Profits used for writing off non-cash accounts :		
Goodwill (Rs. 1,15,000—Rs. 90,000)	25,000	
Depreciation— Plant	10,000	
Depreciation— Land and buildings	20,000	
		55,000
		Rs. 2,48,000
Less : Opening balance of profit and loss account		30,000
Profit before adjustments of non-cash items and reserves, etc.		Rs. 2,18,000

(*ii*) *Calculation of cash from operation* :

Profits as per (*i*) above		2,18,000
Add : Increase in current liabilities :		
Creditors	28,000	
Decrease in current assets :	Nil	
		28,000
		2,46,000
Less : Increase in current assets :		
Debtors (Rs. 2,00,000—Rs. 1,60,000)	40,000	
Stock (Rs. 1,09,000—Rs. 77,000)	32,000	
Bills receivable (Rs. 30,000—Rs. 20,000)	10,000	

Decrease in current liabilities :		
Bills payable (Rs. 20,000—Rs. 16,000)	4,000	
		86,000
Cash from operation		Rs. 1,60,000

STATEMENT OF CASH FLOW

Cash in hand and at bank as on December 31, 1979 (Rs. 15,000+Rs. 10,000)		Rs. 25,000
Add inflows of cash :		
Operation	1,60,000	
Sale of land and buildings	10,000	
Issue of shares	1,00,000	
		2,70,000
Total cash available for use		2,95,000
Less outflows :		
Purchase of plant	1,30,000	
Payment of final dividend for the last year	42,000	
Payment of interim dividend for the current year	20,000	
Payment of tax	35,000	
Redemption of preference shares	50,000	
		2,77,000
Cash in hand and at bank as on December 31, 1980		Rs 18,000

TUTORIAL NOTES

(1) PLANT ACCOUNT

	Rs.		Rs
To Opening balance	80,000	By Depreciation	10 000
To Purchase (balancing figure)	1,30,000	By Closing balance	2,00,000
	Rs. 2,10,000		Rs. 2,10,000

(2) BUILDING ACCOUNT

	Rs.		Rs.
To Opening balance	2,00,000	By Depreciation	20,000
		By Sale (balancing figure)	10,000
		By Closing balance	1,70,000
	Rs. 2,00,000		Rs. 2,00,000

(3) PROVISION FOR TAX

	Rs.		Rs.
To Tax paid	35,000	By Opening balance	40,000
To Closing balance	50,000	By Profit and loss account (balancing figure)	45,000
	Rs. 85,000		Rs. 85,000

Alternatively :

SOURCES AND USES OF FUNDS
For the year ended 31st December 1980

Sources :			
Internal		Rs.	Rs.
Profit from operation		1,63,000*	
Add : Depreciation on plant		10,000	
Depreciation on land and buildings		20,000	
Goodwill written off		25,000	
			2,18,000
Sale of land and buildings			10,000
Issue of shares			1,00,000
		Rs.	3,28,000
Uses :			
Purchase of plant			1,30,000
Redemption of preference shares			50,000
Changes in working capital			
	Increase Rs.	*Decrease* Rs.	
Increase in stocks	32,000		
Increase in debtors	40,000		
Increase in bills receivable	10,000		
Increase in creditors		28,000	
Decrease in bills payable	4,000		
	Rs. 86,000	28,000	58,000
Payment of dividends			
Interim	Rs. 20,000		
Final	42,000		
			62,000
Payment of taxes			35,000
		Rs.	3,35,000
Reduction in cash (Rs. 25,000—Rs. 18,000)			7,000

* PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Proposed dividend	50,000	By Balance b/d	30,000
To Interim dividend	20,000	By Current profits (after depreciation and goodwill written off)	1,63,000
To Provision for tax	45,000		
To General reserve	30,000		
To Balance c/d	48,000		
Rs.	1,93,000	Rs.	1,93,000

Illustration 14. The following are the summarised balance sheets of AMCO as on December 31, 1978 and 1979 :

Liabilities	*1978* Rs.	*1979* Rs.	*Assets*	*1978* Rs.	*1979* Rs.
Share capital	2,00,000	2,50,000	Land and buildings	2,00,000	1,90,000
General reserve	50,000	60,000	Machinery	1,50,000	1,69,000
Profit and loss	30,500	30,600	Stock	1,00,000	74,000
Bank loan (long-term)	70,000	—	Sundry debtors	80,000	64,200
Sundry creditors	1,50,000	1,35,200	Cash	500	600
Provision for taxation	30,000	35,000	Bank	—	8,000
			Goodwill	—	5,000
Rs.	5,30,500	5,10,800	Rs.	5,30,500	5,10,800

Additional information supplied. During the year ended December 1979 : (*a*) Dividend of Rs. 23,000 was paid ; (*b*) assets of another company were purchased for a consideration of Rs. 50,000 payable in shares. The following assets were purchased : Stock Rs. 20,000, Machinery Rs. 25,000 ; (*c*) Machinery was further purchased for Rs. 8,000 , (*d*) Depreciation written off machinery Rs. 12,000 : (*e*) Income-tax provided during the year Rs. 33,000 ; Loss on sale of machinery Rs. 200 was written off to general reserve.

You are required to make the statement of cash flow.

Solution :

(*i*) *Calculation of profit made during the year :*

Closing balance of profit and loss account			Rs. 30,600
Add : Appropriations made during the year :			
(*a*) Proposed dividend		23,000	
General reserve—closing balance	60,000		
Less ; Opening balance	50,000		
	10,000		
Add : Loss on sale	200		
(*b*) General reserve made during the year		10,200	
(*c*) Income-tax		33,000	66,200
			96,800
Add : Non-cash items :			
Depreciation—Machinery		12,000	
—Land and building		10,000	22,000
			1,18,800
Less : Opening balance of profit and loss account			30,500
Profit before appropriations and non-cash expenses			Rs. 88,300

(ii) *Calculation of cash from operation* :

Profit before appropriation and non-cash expenses			Rs. 88,300
Add : Decrease in current assets :			
Stock opening balance		1,00,000	
Closing balance	74,000		
Less: Purchased on issue of shares	20,000		
		54,000	
Decrease in stock		46,000	
Debtors (Rs. 80,000 – Rs. 64,200)		15,800	
			61,800
			1,50,100
Less : Decrease in current liability—creditors			14,800
Cash from operation			Rs. 1,35,300

(iii) *Statement of* CASH FLOW

Cash in hand and at bank, 1st January 1979		Rs. 500
Add : INFLOWS *of cash* :		
Cash from operation	1,35,300	
Sale of machine	1,800	
		1,37,100
Total cash available for use		1,37,600
Less : OUT FLOWS *of cash* :		
Payment of long-term loan	70,000	
Purchase of machine for cash	8,000	
Payment of dividend	23,000	
Payment of tax	28,000	
		1,29,000
Cash in hand and at bank as on December 31, 1979		Rs. 8,600

TORIAL NOTES

(1) MACHINE ACCOUNT

To Opening balance	Rs. 1,50,000	By Loss on sale of machine	Rs. 200
To Purchase by issue of shares	25,000	By Depreciation	12,000
To Purchase for cash	8,000	By Cash (sale of machine)	1,800
		By Closing balance	1,69,000
	Rs. 1,83,000		Rs. 1,83,000

PROVISION FOR TAX ACCOUNT

To Bank (tax paid)—balancing figure	Rs. 28,000	By Opening balance	Rs. 30,000
To Closing balance	35,000	By Profit and loss account—tax provided during the year	33,000
	Rs. 63,000		Rs. 63,000

Illustration 15. The most recent statement of the financial position of a small wholesale business, a sole trader, appears in summarised form as below :

Profit and loss account for the year ended 30th June 1977

Sales	Rs.	36,000
Cost of goods sold		23,040
Gross profit		12,960
Operating expenses		8,640
Net profit	Rs.	4,320

Balance sheet at 30th June 1977.

Fixed assets, net of accumulated depreciation on a straight line basis			Rs. 2,350
Current assets :			
Stocks		Rs. 7,680	
Debtors		6,000	
Cash		1,178	
		Rs. 14,858	
Less : Current liabilities :			
Creditors	Rs. 1,920		
Trade-expense	720		
		2,640	
			12,218
Proprietor's interest			Rs. 14,568

The proprietor is 60 years old and plans to retire in 5 years time. Demand for his product was constant throughout the year ended 30th June 1977 and up to that date he had expected it to continue at the same level but he now expects it to fall steadily by an equal monthly amount over the 5 year period beginning in July 1977 and falling to zero by 30th June 1982. He asks you to assume that there will be no changes in sales price or purchase price in the products stocked and sold over the period nor in the periods of credit received and allowed nor in stock turnover period and also assume that he can reduce his operating costs by about a fifth annually, starting immediately in July 1977.

The business is not seasonal.

You are required to calculate the amount of net cash flow for the year ended 30th June 1978. (P.E. II England July 1977)

Solution

(i) PROFIT AND LOSS ACCOUNT

For the year ending 30-6-78

To Opening stock	Rs. 7,680	By Sales	Rs. 32,100
To Purchases	19,200	By Closing stock	6,336
To Gross profit b/d	11,556		
	Rs. 38,436		Rs. 38,436
To Operating expenses	6,536	By Gross profit b/d	11,556
To Depreciation	470		
To Net profit	4,550		
	Rs. 11,556		Rs. 11,556

(*iii*) *Cash from operations :*

Net profit as calculated above		Rs. 4,550
Add : Decrease in debtors		1,150
Decrease in stocks		1,344
		Rs. 7,044
Deduct decrease in creditors	Rs. 512	
decrease in outstanding expenses	136	
		648
		6,396
Add : Depreciation (non-cash charge)		470
		Rs. 6,866

As there are no other sources or uses, the cash balance for the year will increase by Rs. 6,866.

TUTORIAL NOTES

(1) Sales. Present level Rs. 3,000 per month.

$$\text{Monthly reduction } \frac{\text{Rs. } 3{,}000}{60} = \text{Rs. } 50.$$

Sales for next 12 months = Rs (2,950 + 2,900 + 2,850 + 2,800 + 2,750 + 2,700 + 2,650 + 2,600 + 2,550 + 2,500 + 2,450 + 2,400) = Rs. 32,100.

(2) *Closing debtors* : At present debtors represent 2 months' sales. ..king the same basis debtors would be equal to sales in May and June ..s. 4,850.

(3) *Cost of sales* : Present ratio to sales = 64%.
Taking the same ratio 64% of Rs. 32,100 = Rs. 20,544.

(4) *Closing trade creditors* :

Sales for the month of June	Rs. 2,400
Less : Decrease in closing stock at sale price (4 × 50)	200
	Rs. 2,200

Cost of sales of Rs. 2,200 will be 64% of Rs. 2,200 *i.e.*, Rs. 1,408.

(5) *Closing stock* :

Opening stock represents ⅓rd of cost of sales *i.e.*, 4 months. Therefore closing stock will represent the last 4 months' cost of sales *i.e.*, 64% of Rs. 9,900 = Rs. 6,336.

(6) *Expenses* : Assuming that the value of fixed assets will be nil at the end of five years, the annual depreciation works out to Rs. 470. It is given that operating costs can be reduced by 1/5th annually.

Therefore, projected cash expenses will be

$$\text{Rs. } (8{,}640 - 470) \times \tfrac{4}{5} = \text{Rs. } 6{,}536.$$

(7) *Closing expense creditors*: Opening balance equals 1/12th of operating expenses (including depreciation). On the same basis, closing balance = 1/12 × (Rs. 6,536 + Rs. 470) = Rs. 584.

Alternatively:

Solution can also be worked out by the Balance Sheet method as shown below :

BALANCE SHEET
as on 30th June, 1978

Liabilities		Rs	*Assets*		Rs.
Creditors : Trade		1,408	Fixed assets	2,350	
Expenses		584	*Less* : Depreciation	470	
Proprietor's interest at commencement	14,568				1,880
Add : Net profit	4,550		Debtors		4,850
		19,118	Stock		6,336
			Cash (balancing figure)		8,044
		Rs. 21,110			Rs. 21,110

Cash as per balance sheet above	Rs 8,044
Cash at commencement of the period	1,178
Net cash inflow for the year	Rs. 6,866

Illustration 16. The Mahajan Ltd has prepared the following trial balance as on December 31, 1978 and 1979 :

	(0,00,000 omitted)				(0,00,000 omitted)		
Debits	*1978*	*1979*	Change	*Credits*	*1978*	*1979*	Change
Cash Rs	20	7	−13	Accounts payable for merchandise	14	39	25
Accounts receivable	5	20	15	Accrued property tax payable	1	3	2
Inventory	15	40	25	Mortgage payable in 1944	—	40	40
Prepaid general expenses	2	4	2	Share capital	70	70	—
Fixed assets, net	50	91	41	Retained earnings	7	10	3
Rs.	92	162	70	Rs.	92	162	70

INCOME STATEMENT AND RECONCILIATION
OF RETAINED EARNINGS
for the year ended December 31, 1979

(0,00,000 omitted)

Sales		Rs. 100
Less Cost of goods sold :		
Inventory, December 31, 1978	15	
Purchases	98	
Cost of goods available for sale	113	
Inventory, December 31, 1979	40	
		37

Gross profit		Rs. 27
Less : Other expenses :		
General expenses	11	
Depreciation	8	
Property taxes	4	
		23
Net income		4
Less : Dividends		1
Net income of the period retained		3
Retained earnings, December 31, 1978		7
Retained earnings, December 31, 1979		Rs. 10

On December 28, 1979 Mahajan Ltd paid Rs. 90,00,000 in cash and signed Rs. 4,00,00,000 mortgage on a new building acquired to accommodate an expansion of operations. In view of the fact that the net income of Rs. 40,00,000 was the highest in the company's history, directors of Mahajan Ltd were perplexed by the company's extremely low cash balance.

Required : 1. Submit a statement of cash flow together with your supporting work.

2. Prepare, for the chairman, a brief note as to why cash has decreased even though net working capital has increased and net income was Rs. 40,00,000.

Solution :

STATEMENT OF CASH FLOW
for the year ended December 31, 1979

Cash balance, December 31, 1978		Rs. 2,00,00,000
Less uses of cash :		
Dividend	Rs. 10,00,000	
Operation (1)	10,00,000	
Fixed assets (purchase)	90,00,000	
Tax	20,00,000	
		1,30,00,000
Cash balance, December 31, 1979		Rs. 70,00,000

Tutorial Notes

(1) Calculation of application of casn on account of operation

Net income before dividend		Rs. 40,00,000
Add Non-cash items		
Tax provision	40,00,000	
Depreciation	80,00,000	
		1,20,00,000
Net income before non-cash items and appropriations		1,60,00,000
Add : Increase in current liabilities :		
Accounts payable		2,50,00,000
		4,10,00,000
Less : Increase in current assets :		
Accounts receivable	1,50,00,000	
Inventory	2,50,00,000	
Prepaid expenses	20,00,000	
		4,20,00,000
Cash outflow on account of operation		Rs. 10,00,000

To the Chairman :

Reasons for bad position of cash balance on December 31, 1979 can be established in the heavy demand for cash to expand fixed assets, inventories and receivables. These have reduced cash balance to rock position despite heavy profits.

In case, in this problem, fund is used to mean net working capital, then it will show a net increase in net working capital of Rs. 20,00,000 *(i e, Sources Rs. 1,20,00,000 and applications Rs. 1,00,00,000)*. Statement of Sources and Applications of net working capital (funds) may be put as follows :

Mahajan Ltd

STATEMENT OF SOURCES AND APPLICATIONS

For the year ended Dec 31, 1979

Sources :		
Funds provided by operations :	Rs. 40,00,000	
Less : Applications ·	80,00,000	
	———	1,20,00,000
Add : Depreciation		
Dividends	10,00,000	
Purchase of fixed asset, *less* Mortgage	90,00,000	
	———	1,00,00,000
Net increase in net working capital	Rs.	20,00,000

Illustration 17. The following condensed statements are those of Lakhimpur Company :

INCOME STATEMENT

For the year ended ....

	Dec. 31, 1979	*Dec 31, 1978*
Sales	Rs. 4,25,000	3,50,000
Operating expenses (including depreciation of Rs 10,000)	3,40,000	2,80,800
	85,000	69,200
Interest on debentures	3,000	4 200
Net income before tax	82,000	65,000
Income tax expense	36,000	27,500
Net income after tax	Rs. 46,000	37,500

STATEMENT OF RETAINED INCOME

For the year ended .. . .

	Dec. 31, 1979	*Dec. 31, 1978*
Retained income, beginning of year	Rs. 27.500	25,000
Net income for the year	46,000	37,500

		73,500	62,500
Dividends		35,000	35,000
Retained income, end of year	Rs.	38,500	27,500

STATEMENT OF FINANCIAL POSITION

as on.........

Liabilities	*1979*	*1978*	*Assets*	*1979*	*1978*
Accounts payable Rs.	20,000	12,500	Cash Rs.	9,000	15,000
Income-tax payable	36,000	27,500	Accounts receivable	25,000	31,000
6% Debentures due on 31-12-1986	50,000	70,000	Inventories	60,000	45,000
			Plant and equipment	1,20,000	1,05,000
Total liabilities Rs.	1,06,000	1,10,000	—Accumulated depreciation	(37,000)	(27,000)
Stockholders Equity					
Capital stock	32,500	31,500			
Retained income	38,500	27,500			
Total stockholders equity	71,000	59,000			
Total equities Rs.	1,77,000	1,69,000	Total assets Rs.	1,77,000	1,69,000

Required :

To prepare cash flow statement.

Solution :

Solution to this psoblem has been given in a different way to enable students to know alternative practice of preparing cash flow statement. However, students can prepare this in the usual way adopted in the book in other preceding illustrations.

LAKHIMPUR COMPANY—STATEMENT OF CASH FLOWS

For the year ended Dec. 31, 1979

Cash balance, Dec. 31, 1978		Rs. 15,000
Receipts :		
Collection of accounts receivable	6,000	
Collection from capital stock	1,000	
Net collection from operation	84,500[1]	
Total receipts		91,500
Cash available for use		1,06,500
Disbursements :		
Payment for plant	15,000	
Payment of income tax	27,500	
Payment of debentures	20,000	
Payment of dividend	35,000	
Total disbursements		97,500
Cash balance, Dec. 31, 1979		Rs. 9,000

[1] *Net collection for operation is calculated as follows :*

Collection from Sales			Rs. 4,25,000
Less : Expenses paid :			
Expense as per income statement		Rs. 3,40,000	
Less Depreciation not resulting in inflow of cash		10,000	
		3,30,000	
Add : Interest on debentures resulting in outflow of cash		3,000	
		3,33,000	
Add Payment for increase in inventory (Rs. 60,000—Rs 45 000)	15,000		
Less : Financed by the creditors, *i e.*, increase in accounts payable	7,500		
Net Payment for inventory		7,500	
Total payments for expenses			3,40,500
Net inflow of cash from operation			Rs. 84,500

Illustration 18.

Foremost Company

STATEMENT OF POSITION

	December 31, 1979		December 31, 1978	
	Rs.	Rs.	Rs.	Rs
Assets				
Current assets :				
Cash	20,000		18,000	
Account receivable	30,000		20,000	
Inventory	45,000		29,000	
Total current assets		95,000		67,000
Fixed assets :				
Equipment (cost)	50,000		40,000	
Accumulated depreciation	20,000		15,000	
Total fixed assets		30,000		25,000
Total assets		Rs. 1,25,000		Rs. 92,000
Liabilities				
Current Liabilities :				
Accounts payable	12,000		10,000	
Notes payable	20,000		15,000	
Income tax payable	6,000		4,000	
Total current liabilities		38,000		29,000
Long term Liabilities :				
6% Debentures, 1986		—		15,000
Total liabilities		38,000		41,000
Stock-holders Equity :				
Share capital	60,000		40,000	
Retained income	27,000		8,000	
Total shareholders equity		87,000		45,000
Total equities		Rs. 1,25,000		[illegible]000

		73,500	62,500
Dividends		35,000	35,000
Retained income, end of year	Rs.	38,500	27,500

STATEMENT OF FINANCIAL POSITION

as on.........

Liabilities	*1979*	*1978*	*Assets*	*1979*	*1978*
Accounts payable	Rs. 20,000	12,500	Cash Rs.	9,000	15,000
Income-tax payable	36,000	27,500	Accounts receivable	25,000	31,000
6% Debentures due on 31-12-1986	50,000	70,000	Inventories	60,000	45,000
			Plant and equipment	1,20,000	1,05,000
Total liabilities	Rs. 1,06,000	1,10,000	—Accumulated depreciation	(37,000)	(27,000)
Stockholders Equity					
Capital stock	32,500	31,500			
Retained income	38,500	27,500			
Total stockholders equity	71,000	59,000			
Total equities	Rs. 1,77,000	1,69,000	Total assets	Rs. 1,77,000	1,69,000

Required :

To prepare cash flow statement.

Solution :

Solution to this psoblem has been given in a different way to enable students to know alternative practice of preparing cash flow statement. However, students can prepare this in the usual way adopted in the book in other preceding illustrations.

LAKHIMPUR COMPANY—STATEMENT OF CASH FLOWS

For the year ended Dec. 31, 1979

Cash balance, Dec. 31, 1978		Rs. 15,000
Receipts :		
Collection of accounts receivable	6,000	
Collection from capital stock	1,000	
Net collection from operation	84,500[1]	
Total receipts		91,500
Cash available for use		1,06,500
Disbursements :		
Payment for plant	15,000	
Payment of income tax	27,500	
Payment of debentures	20,000	
Payment of dividend	35,000	
Total disbursements		97,500

[1] *Net collection for operation is calculated as follows :*

Collection from Sales			Rs. 4,25,000
Less : Expenses paid :			
Expense as per income statement		Rs. 3,40,000	
Less Depreciation not resulting in inflow of cash		10,000	
		3,30,000	
Add : Interest on debentures resulting in outflow of cash		3,000	
		3,33,000	
Add Payment for increase in inventory (Rs. 60,000—Rs 45 000)	15,000		
Less : Financed by the creditors, *i e.*, increase in accounts payable	7,500		
Net Payment for inventory		7,500	
Total payments for expenses			3,40,500
Net inflow of cash from operation			Rs. 84,500

Illustration 18.

Foremost Company

STATEMENT OF POSITION

	December 31, 1979		December 31, 1978	
Assets	Rs.	Rs.	Rs.	Rs.
Current assets :				
Cash	20,000		18,000	
Account receivable	30,000		20,000	
Inventory	45,000		29,000	
Total current assets		95,000		67,000
Fixed assets :				
Equipment (cost)	50,000		40,000	
Accumulated depreciation	20,000		15,000	
Total fixed assets		30,000		25,000
Total assets		Rs. 1,25,000		Rs 92,000
Liabilities				
Current Liabilities :				
Accounts payable	12,000		10,000	
Notes payable	20,000		15,000	
Income tax payable	6,000		4,000	
Total current liabilities		38,000		29,000
Long-term Liabilities :				
6% Debentures, 1986		—		15,000
Total liabilities		38,000		44,000
Stock-holders Equity :				
Share capital	60,000		40,000	
Retained income	27,000		8,000	
Total shareholders equity		87,000		48,000
Total equities		Rs. 1,25,000		Rs. 92,000

STATEMENT OF INCOME AND RETAINED INCOME

For the year ended Dec. 31, 1979

Sales		Rs. 2,10,000
Deduct expenses :		
Depreciation	Rs. 5,000	
Income tax	6,000	
Interest	900	
All other expenses	1,73,100	
Total expenses		1,85,000
Net income		25,000
Deduct dividend		6,000
Addition to retained income		19,000
Add : Retained income, Dec. 31, 1978		8,000
Retained income, December 31, 1979		Rs. 27,000

You are required to prepare statement of cash flow.

Solution :

Solution to this illustration also has been given in a different way. This has been done to enable students to know the alternative practice of preparing cash flow statement. If they like they can prepare it in the usual way.

Foremost Company

STATEMENT OF RECEIPTS AND DISBURSEMENTS

Cash, balance Dec. 31, 1978			Rs. 18,000
Receipts :			
(1) Sales during the year		2,10,000	
Less : Credit sale, *i.e.*, increase in accounts receivable		10,000	
Net collection from sales		2,00,000	
Less : Operating expenses :			
Other expenses	1,73,100		
Interest	900	1,74,000	
Net collection from operation			26,000
(2) Collection from issue of share capital			20,000
Cash available for use			64,000
Disbursements :			
(1) *Inventory*			
Inventory at the end		45,000	
Less : Inventory in the beginning		29,000	
Less : Financed by creditors not resulting in inflow of cash		16,000	

Accounts payable at the end	12,000		
Less : Amount in the beginning	10,000		
Increase in account payable	2,000		
Add : Increase in notes payable	5,000		
		7,000	
Net payment for inventory		9,000	
(2) Income tax		4,000	
(3) Equipment		10,000	
(4) Debenture		15,000	
(5) Dividend		6,000	
Total disbursements			44,000
Cash balance, December 31, 1979			Rs. 20,000

Notes : 1. *Since provision for income-tax made during 1979 in the income* statement also appears in the position statement, it is clear that there is an outstanding liability for that amount. Since, it has not been paid, it does not appear under disbursements. However, income-tax provision of the previous year Rs. 4,000 does not appear in the position statement of this year, therefore, it must have been paid and, hence, shown in disbursements.

2. Provision for dividend, appearing in the income statement, does not appear in the position statement and hence it must have been paid.

ASSIGNMENT MATERIAL

Objective Type Questions

1. State whether the following statements are 'true' or 'false'.

(*a*) Cash-flow statement explains the impact of transactions on the cash balance.

(*b*) Cash-flow statement does not take into account the non-current items.

(*c*) Cash-flow statement is prepared by budgeting the cash receipts and cash payments.

(*d*) To find out the cash from operations decrease in debtors must be subtracted from the net operating profit

(*e*) Cash from operations is ascertained by converting the income statement from accrual basis to cash basis.

(*f*) Loss on sale of fixed assets is deducted from the operating profit to arrive at cash generated from operations.

(*g*) A cash budget indicates the amount of loan required and the time at which it is needed.

Fill in the blanks.

(*a*) The adjusted profit and loss method of preparing cash budget is also known as............

STATEMENT OF INCOME AND RETAINED INCOME

For the year ended Dec. 31, 1979

Sales			Rs. 2,10,000
Deduct expenses :			
Depreciation	Rs.	5,000	
Income tax		6,000	
Interest		900	
All other expenses		1,73,100	
Total expenses			1,85,000
Net income			25,000
Deduct dividend			6,000
Addition to retained income			19,000
Add : Retained income, Dec. 31, 1978			8,000
Retained income, December 31, 1979			Rs. 27,000

You are required to prepare statement of cash flow.

Solution :

Solution to this illustration also has been given in a different way. This has been done to enable students to know the alternative practice of preparing cash flow statement. If they like they can prepare it in the usual way.

Foremost Company

STATEMENT OF RECEIPTS AND DISBURSEMENTS

Cash, balance Dec. 31, 1978			Rs. 18,000
Receipts :			
(1) Sales during the year		2,10,000	
Less : Credit sale, *i.e.*, increase in accounts receivable		10,000	
Net collection from sales		2,00,000	
Less : Operating expenses :			
Other expenses	1,73,100		
Interest	900	1,74,000	
Net collection from operation			26,000
(2) Collection from issue of share capital			20,000
Cash available for use			64,000
Disbursements :			
(1) Inventory			
Inventory at the end		45,000	
Less : Inventory in the beginning		29,000	

Less : Financed by creditors not resulting in inflow

Accounts payable at the end	12,000		
Less : Amount in the beginning	10,000		
Increase in account payable	2,000		
Add : Increase in notes payable	5,000		
		7,000	
Net payment for inventory		9,000	
(2) Income tax		4,000	
(3) Equipment		10,000	
(4) Debenture		15,000	
(5) Dividend		6,000	
Total disbursements			44,000
Cash balance, December 31, 1979			Rs. 20,000

Notes 1. Since provision for income-tax made during 1979 in the income statement also appears in the position statement, it is clear that there is an outstanding liability for that amount. Since, it has not been paid, it does not appear under disbursements However, income-tax provision of the previous year Rs. 4,000 does not appear in the position statement of this year, therefore, it must have been paid and, hence, shown in disbursements.

2. Provision for dividend, appearing in the income statement, does not appear in the position statement and hence it must have been paid.

ASSIGNMENT MATERIAL

Objective Type Questions

1. State whether the following statements are 'true' or 'false'.

(*a*) Cash-flow statement explains the impact of transactions on the cash balance.

(*b*) Cash-flow statement does not take into account the non-current items.

(*c*) Cash-flow statement is prepared by budgeting the cash receipts and cash payments.

(*d*) To find out the cash from operations decrease in debtors must be subtracted from the net operating profit.

(*e*) Cash from operations is ascertained by converting the income statement from accrual basis to cash basis.

(*f*) Loss on sale of fixed assets is deducted from the operating profit to arrive at cash generated from operations.

(*g*) A cash budget indicates the amount of loan required as well as the time at which it is needed.

Fill in the blanks.

(*a*) The adjusted profit and loss method of preparing cash budget is also known as............

(*b*) When there are both cash and credit sales cash from operations will be equal to net operating profit plus or minus ....

(*c*) If a business sells Rs. 1,00,000 worth of goods of which Rs. 0,000 are on credit, then the funds released by the sale transaction are Rs.........and the cash released is Rs......... .

(*d*) While funds flow statements are useful for planning........... operations, cash-flow statements are useful for planning.........operations of the business.

(*e*) While cash can be utilised by business for making immediate payments, funds (other than cash) can only be used for making payments in the......... .

(*f*) Funds are relatively.........liquid than cash.

(*g*) A highly liquid position of a business is indicative of .... management of cash.

3. Indicate the correct answer.

(*a*) If the net operating profit of a business is Rs. 60,000 and the debtors have decreased during the year by Rs. 20,000, cash from operations equals

(*i*) Rs. 60,000
(*ii*) Rs. 80,000
(*iii*) Rs. 40,000

(*b*) Sale of long-term investments at a loss
(*i*) increases the cash
(*ii*) decreases the cash
(*iii*) has no effect on cash.

(*c*) Payment of income-tax for which a provision has been made
(*i*) increases the cash
(*ii*) decreases the cash
(*iii*) has no effect on cash.

4. Indicate whether each of the following transactions would be a source (increase) or use (decrease) of funds if funds are defined as cash :

(*a*) Sale of merchandise on account, (*b*) Sale of merchandise for cash (*c*) Borrowing cash on a short-term note payable, (*d*) Collection of accounts receivable, (*e*) Purchase of merchandise on account, (*f*) Purchase of merchandise for cash, (*g*) Purchase of equipment on account, (*h*) Declaration of dividend payable in cash, (*i*) Payment of dividend declared earlier, (*j*) Payment of account payable, (*k*) Issuance of dividend in the form of share capital, (*l*) Recording periodic depreciation, (*m*) Recording the bad debts, (*n*) Recording the provision for taxation. 22·1

5. During January, 1979, the Madhu Company had the following unrelated transactions : (*a*) Equipment were purchased for Rs. 5,000. One-half was paid in cash and the balance due was to be discharged after one year. (*b*) Accounts payable of Rs. 2,000 was paid in cash. (*c*) Sold for Rs. 100 a truck which was completely depreciated and not in use. (*d*) Purchased for Rs. 4,000 some stock of another company as a temporary

investment of excess funds. (*e*) Purchased merchandise inventory of Rs. 500 on account. (*f*) Issued a 90-day note in payment of an account payable of Rs. 850. (g) Paid interest Rs. 24, Principal Rs. 400—on a note payable. (*h*) Purchased a three-year insurance policy for Rs 120. (*i*) The owners invested an additional amount of Rs. 5,000 in the business. (*j*) The company discovered a cash shortage of Rs. 10 in the petty cash fund.

Considering the above transactions separately, how would each affect a statement if funds were defined as : (*a*) Cash and (*b*) Working capital ?

Problems

Cash Budget

1. In May 1978, Shri Ananth got Rs. 10,000 in a Delhi Lottery and started a business to manufacture a certain component for BHEL. During the same month, he purchased machineries for Rs 5,00,000, out of a gift of Rs. 1,00,000 from his father-in-law and a loan of Rs. 4,00,000 from a bank. Interest at 9% per annum is payable quarterly in arrears from the month of borrowing. The principal is repayable at Rs. 20,000 every half year. He commenced manufacture on 1-6-1978, and his production and delivery schedule is as under.

30- 6-1978	1,000 units
31- 7-1978	1,500 units
31- 8-1978	2,000 units
30- 9-1978	2,500 units
31-10-1978	3,000 units

and thereafter 3,000 units every month.

He gets Rs. 10 per unit from BHEL. *His variable cost is Rs 6 per* unit. He has fixed expenses to the extent of Rs 1,000 per month. He also wants to draw Rs. 1,000 for his maintenance. His bills are settled after 30 days from the date of supply. His variable cost is to be met by actual payment in the very month. The fixed cost and his drawings are met on the 1st day of next month. He desires always to carry a minimum cash balance of Rs. 2,000 and a maximum one of Rs 10,000.

You are required to prepare a cash budget for each of the 9 months from May 1978 to January 1979. Assume a temporary overdraft from the bank, whenever required within the above mentioned minimum and maximum cash balance requirements. Ignore interest on the overdraft.

[C A. Final (New) 1979]

(Overdraft required August Rs 7,000 and November Rs. 11,000 ; Repayment of overdraft December Rs 10,000 and January Rs. 8,000)

2. Summarised below are the income and expenditure forecasts for the months of March to August 1964 .

Month	*Sales (all credit)* Rs.	*Purchases (all credit)* Rs	*Wages* Rs	*Operating expenses* *Manufacturing* Rs	[illegible]
March	60 000	36 000	9,000	4,000	[illegible]
April	62,000	38,000	8 000	3,000	[illegible]
May	64,000	33,000	10 000	[illegible]	[illegible]
June	58,000	35,000	[illegible] 500	[illegible]	[illegible]
July	56,000	39,000	9,500	[illegible]	[illegible]
August	60,000	34,000	8,000	[illegible]	[illegible]

You are given the following further information :

(*a*) Plant costing Rs. 16,000 is due for delivery in July, payable 10% on delivery and the balance after three months.

(*b*) Advance Tax of Rs. 8,000 each is payable in March and June.

(*c*) Period of credit allowed (*a*) by suppliers : 2 months, and (*b*) to customers : 1 month.

(*d*) Lag in payment of manufacturing expenses : ½ month.

(*e*) Lag in payment of all other expenses : 1 month.

You are required to prepare a cash budget for the three months starting on 1st May, 1964, when there was a cash balance of Rs. 8,000.

[C.A. (Final) 1964]

[*Closing balances : May Rs. 15,750 June Rs. 12,750 and July Rs. 18,400*]

3. A new company to be known as Stratoscope Limited is to be formed on 1st January for the purpose of taking over an existing wholesale business dealing in fancy goods as from the same date, when the present proprietor retires. The purchase consideration of Rs. 1,00,000 is payable in two equal instalments on 1st January and 31st March. The purchase includes freehold buildings valued at Rs. 60,000 furniture and equipment valued at Rs. 15,000, two delivery vans valued at Rs. 5,000 and stock-in-trade valued at Rs. 20,000. A preliminary budget for the first year includes the following information.

(*i*) Sales in the first quarter will be Rs. 20,000 per month, in the second Rs. 18,000 per month, in the third Rs. 24,000 per month and in the fourth Rs. 30,000 per month. Gross profit averages 50% on cost.

(*ii*) Fixed cost is budgeted at Rs. 5,000 per month. Variable overhead is budgeted at 10% of sales value. All expenses are payable on the last day of the month to which they relate.

(*iii*) Debtors are allowed two months' credit—that is, they can be expected to pay for goods on the last day of the second month following that in which the sales are made. Trade creditors allow one month's credit and stocks are to be maintained at Rs. 20,000 throughout the year.

(*a*) Prepare a cash flow statement to calculate the minimum capital required by the new company for the first year. (Assume that the company will not be able to borrow further funds during the year.)

(*b*) Prepare an Income statement for the year taking into account depreciation at 10% on furniture and equipment and 20% on the delivery vans. (Ignore any possibility of paying loan interest during the year.)

(Society of Company and Commercial Accountants)

[*Minimum capital required Rs. 1,35,600 ; Net income Rs. 1,900*]

Cash Flow Statement

4. Following are the comparative balance sheets of Western System Ltd :

Liabilities	*1980*	*1979*	*Assets*	*1980*	*1979*
Share capital	Rs. 19,000	18,000	Cash	Rs 4,000	6,000
Trade creditors and bills payable	7,600	6,400	Trade debtors	19,000	15,500
Profit and loss appropriation account	3,500	2,900	Land and building	6,200	5,000
			Patent rights	900	800
	Rs. 30,100	27,300		Rs 30,100	27,300

Required. A statement of cash flow. 22·3

[*Outflow due to operations Rs. 1,700 : Total sources Rs. 1,000 ; Total uses Rs. 3,000*]

5. Following are the comparative balance sheets of Novo Company :

Liabilities	*Dec. 31 1979*	*Dec 31 1980*	*Assets*	*Dec. 31 1979*	*Dec 31 1980*
Share capital	Rs 70,000	74,000	Cash	Rs 9,000	7,800
Debentures	12,000	6,000	Trade debtors (good)	14,900	17,700
Trade creditors	10,360	11,840	Stock-in-trade	49,200	42,700
Provision for doubtful debts	700	800	Land	20,000	30,000
Profit and loss	10,040	10,560	Goodwill	10,000	5,000
	Rs. 1,03,100	1,03,200		Rs 1,03,100	1,03,200

Additional information : (1) Dividends were paid totalling Rs 3,500. (2) Land was purchased for Rs 10,000 and amount provided for the amortization of goodwill totalled Rs 5,000. (3) Debenture loan was repaid Rs. 6,000.

You are required to prepare cash flow statement 22·4

[*Source from operation Rs 15,620 : Total sources Rs. 21,100 ; Total uses Rs 22,300*]

6. From the following balance sheets of Nosuch Company Limited as on December 31, 1978 and 1979, you are required to prepare cash flow statement for the year ended December 31, 1979 :

Liabilities	*1978*	*1979*	*Assets*	*1978*	*1979*
Share capital	Rs. 1,00,000	1,00,000	Goodwill	Rs 12,000	12,000
General reserve	14,000	18,000	Building	40,000	36,000
Profit and loss	16,000	13,000	Plant	37,000	36,000
Sundry creditors	8,000	5,400	Investments	10,000	11,000
Bills payable	1,200	800	Stock	30,000	23,400
Provision for taxation	16,000	18,000	Bills receivable	2,000	3,200
Provision for doubtful debts	400	600	Debtors	18,000	19,000
			Cash at bank	6,600	15,200
	Rs 1,55,600	1,55,800		Rs 1,55,600	1,55,800

Additional information : (*i*) Depreciation charged on plant Rs. 4,000. (*ii*) Provision for taxation of Rs. 19,000 was made during the year 1979. 22·5

[*Source from operation Rs. 34,800*

7. The following are the summarised trial sheets balance of *PQ* Limited on June 30, 1977 and 1978 :

	June 30, 1977		*June 30, 1978*	
Equity share capital : 30,000 shares of Rs. 10 each issued and fully paid		Rs. 3,00,000		3,00,000
Capital reserve		—		49,200
8% Debentures		—		50,000
Debenture discount	—		1,000	
Freehold property at cost	Rs. 1,22,000		—	
Freehold property at valuation			1,65,000	
Plant and machinery at cost	2,23,000		2,83,000	
Depreciation on plant and machinery	—	1,07,600		1,22,000
Debtors	1,04,600		1,54,600	
Stock and work-in-progress	1,24,000		1,62,500	
Creditors		37,400		49,200
Profit and loss account		1,12,000		1,12,000
Net profit for the year		—		76,500
Dividend paid in respect of 1977			30,000	
Provision for doubtful debts		3,100		6,400
Trade investment at cost			47,000	
Bank		13,500		77,800
Rs.	5,73,600	5,73,600	8,43,100	8,43,100

You are informed that : (*i*) The capital reserve on June 30, 1978 represented the realised profit on the sale of one freehold property together with the surplus arising on revaluation. (*ii*) During the year ended June 30, 1978, plant costing Rs. 18,000 against which a depreciation provision of Rs. 13,500 had been made was sold for Rs. 7,000. (*iii*) On July 1, 1977, Rs. 50,000 debentures were issued for cash at a discount of Rs. 1,000. (*iv*) The net profit for the year is arrived at after crediting the profit on the sale of machinery and charging debenture interest. You are required to prepare a statement which will explain why bank borrowing has increased by Rs. 64,300 during the year ended June 30, 1978. Taxation has been and is to be ignored.
(I.C.W.A., England, 1968) 22·7

[*Source from operation Rs. 66,700 ; Total sources Rs. 1,40,700 ; Total uses Rs. 2,05,000*]

8. A company finds on January 1, 1980, that it is short of funds with which to implement its programme of expansion. On January 1, 1979, it had a credit balance of Rs. 1,80,000. From the following information prepare a statement for the Board of Directors to show how the overdraft of Rs. 68,750, as at December 31, 1979, has arisen.

Figures as per balance sheets as at December 31 :

	1978	1979		1978	1979
Fixed assets Rs	7,50,000	11,20,000	Trade creditors Rs.	2,70,000	3,50,000
Stock and stores	1,90,000	3,30,000	Share capital (in shares of Rs 10 each)	2 50,000	3,00,000
Debtors	3,80 000	3,35,000	Bills receivable	87,500	95,000
Bank balance	1,80,000	—			
Bank overdraft	—	68,750			

The porfit for the year ended December 31, 1979 before charging depreciation and taxation amounted to Rs. 2,40,000. The 5,000 shares were issued on January 1, 1979 at a premium of Rs. 5 per share, Rs. 1,37,500 was paid in March 1979 by way of income-tax. Dividend was paid as follows : 1978 (final) on the capital on December 31, 1969 at 10% *less* tax at 25 per cent ; 1979 (interim) 5% free of tax

(C.A Final, 1970) 22·8

[*Source from operation Rs. 2,17,500 ; Total sources Rs. 2,92,500 ; Total uses Rs. 5,41,250*]

9 The managing director of your company is at askance because of the fall in bank balance inspite of excellent profits made by the business. Explain to him the position by preparing a statement of cash flow.

The balances from the books were as follows :

		1st January 1979		*31st December 1979*
		Rs		Rs
Liabilities :				
Ordinary share capital		3,00,000		4,00,000
General reserve		1,00,000		1,00,000
Profit and loss account balance		50,000		50,000
Profit for the year after provision for taxes and dividends		—		1,00,000
Debentures		1,00,000		2,00,000
Provision for taxation		40,000		80,000
Proposed dividend		30,000		40,000
Creditors		80,000		1,30,000
		7,00,000		11,00,000
Assets :				
Land and buildings		3,00,000		4,00,000
Plant (at cost)	3,00,000		3,60,000	
Less depreciation	1,00,000		1,40,000	
		2,00,000		2,20,000
Investments		30,000		1,40,000
Stock		40,000		1,20,000
Debtors		30,000		2,00,000
Bank balance		1,00,000		20,000
		7,00,000		11,00,000

You have also access to the following information :

(1) During the year machinery costing Rs. 18,000 which had been depreciated by Rs. 11,000 was sold for Rs. 13,000 and the profit was credited to current years profits.

(2) Taxation paid during the year amounted to Rs. 35,000.

Hint : Work out on the model of the alternativeg solution given in illustration 13.

[*Cash from operations Rs. 50,000 ; Total of cash flow statement Rs. 3,73,000*]

10. The following are summaries of the balance sheets of *EG* Limited as at June 30, 1979 and June 30, 1980 :

Current liabilities :	*30-6-1979*		*30-6-1980*	
Sundry creditors	Rs. 8,000		5,320	
Bills payable	1,500		900	
Accrued expenses	250		160	
Provision for taxation	19,000		21,000	
Provision for doubtful debts	1,000		1,200	
		29,750		28,580
Shareholders equity :				
Paid-up capital	1,00,000		1,00,000	
General reserve	15,000		18,000	
Dividend equalization reserve	6,400		8,000	
Profit and loss appropriation	17,000		16,000	
		1,38,400		1,42,000
		Rs. 1,68,150		1,70,580

	30-6-1979		*30-6-1980*	
Current assets :				
Cash at bank	Rs. 8,000		9,000	
Trade debtors	19,000		20,000	
Pre-payments	70		300	
Bills receivable	3,000		2,000	
Stock-in-trade	30,000		28,000	
		60,070		59,300
Fixed assets :				
Buildings	46,800		45,000	
Plant and machinery	38,280		42,030	
Goodwill	13,000		13,000	
Investments	10,000		11,250	
		1,08,080		1,11,280
		Rs. 1,68,150		Rs. 1,70,580

The following additional information is received from the general ledger : (*a*) The provision for doubtful debts charged to profit was Rs. 400. (*b*) Income-tex paid during the year Rs. 18,000. (*c*) Interim dividend of Rs. 5,000 was paid on April 9, 1980. (*d*) Additional plant totalling Rs. 5,000 was purchased on May 1, 1980. (*e*) Investments (par value Rs. 5,000) were sold on November 1, 1979 for Rs. 4,800 and on January ... investments (par value Rs. 5,000) were purchased. You are

required to prepare a statement of cash flow. **29 9**

(*Source from operation Rs. 34,250 ; Total sources Rs. 40,050 ; Total uses Rs. 39,050*)

11. Given below are the changes in account balances of Ahmed, a retailer in general merchandise, for the final year ended October 31, 1979 :

Cash	Rs. 48,000	Accumulated depreciation	Rs. 10,000
Debtors	(8,000)	Accounts payable	(5,000)
Provision for doubtful debts	(200)	Accrued liabilities	400
Stock-in-trade	(15,000)	*Ahmed's capital*	44,800
Equipment	25,000		

The parentheses denote a decrease in the debit or credit balances normal to a given account

Debtors of Rs. 1,000 were written off as uncollectible. Equipment costing Rs. 7,500 was sold for Rs. 3,000 resulting in a loss of Rs. 600. Net income, including the loss on equipment, amounted to Rs. 64,800. You are required to prepare cash flow statement. ***22 10***

(*Source from operation Rs. 95,100; Total sources Rs 1,05,100 ; Total uses Rs 57,000*)

12. The operating data for Pramoda Limited for the current year include the following :

(*i*) Sales	Rs 4,05,000	(*iv*) Interest expense	Rs. 4,100
(*ii*) Purchases (including Rs 6,000 acquired by issue of shares)	2,25,000	(*v*) Income taxes	25,200
(*iii*) Operating expenses, including Rs. 22,000 depreciation	1,00,000	(*vi*) Cash dividend paid	30,000

The following information is taken from year-end statements of financial position :

	End of year	*Beginning of year*		*End of year*	*Beginning of year*
Accounts payable Rs.	14,150	25 000	Cash Rs	?	18,750
Income taxes payable	25,200	10,000	Debtors	42,250	46,000
Interest payable	300	350	Stock-in-trade	61,000	70,000
Equipment notes payable	47,400	58,400	Current pre-payments	3,000	2,200
Share capital Rs. 10 at par	70,000	55,000	Furniture and equipment	1,78,000	1,65,000
Capital reserve	12,000	2,000	*Less* Accumulated depreciation	(1,35,000)	(1,13,000)
Undistributed earnings	?	?	Land for future expansion	40,000	– 0 –
Rs.	?	1,88,950	Rs	?	1,88,950

Late in current year 1,500 shares were issued in exchange for assets with fair values as follows : land Rs 15,000 , stock-in-trade Rs. 6,000 ; furniture Rs. 4,000 You are required to prepare cash flow statement. Give working. **22 11**

(*Undistributed earnings in the end Rs. 47,700 . Cash balance at the end Rs. 27,500 ; Total sources Rs. 1,23,350 ; Total uses Rs. 95,850*)

SUGGESTED READING

1. ... Flow, Cash Flow and other related Segments—J.D. Mobile
2. [illegible]
3. [illegible] Howard
4. *Management Accounting*—W.M. Harper

5

Budgetary Control

Scope

This chapter is mainly written to familiarise the students with the preparation of (1) working capital budgets and (2) Master budgets. The preparation of cash budget is already dealt with in the previous chapter. As a preliminary to the preparation of the budgets, some ideas about budgets and budgetary control are also discussed.

Meaning of budget. A budget may be defined as a quantitative expression of a business plan for a specified future period, usually a year. It is simply a financial forecast for a future period. According to the definition given by The Institute of Cost and Management Accountants, England, a buget is "A financial and/or quantitative statement, prepared and approved prior to a defined period of time, of the policy to be pursued during that period for the purpose of attaining a given objective. It may include income, expenditure and the employment of capital." Generally, this exercise ends up in the preparation of a master budget—the overall plan which takes into account the management goals relating to the most important functions, *viz.*, production, sales, distribution and finance. The master plan quantifies the targets for production, sales, net income and also finance. Usually the master plan comprises of the profit and loss account, balance sheets, a statement of changes in financial position and a cash-flow statement. There are, no doubt, several functional budgets to be prepared before the master budget can be drawn. Examples of functional budgets are production budget, cash budget, sales budget, etc.

Meaning of budgetary control. Every plan must be followed by action or operation. The management has to control the operation continuously in line with the plans so that the planned results may be achieved. Therefore, this plan-action-control may be considered to be a triangle, and without any one aspect the triangle is incomplete. Budgetary control is, therefore, the control exercised by the management in comparing the performance with the plans and initiating corrective action to secure planned results. So the whole exercise of budgetary control involves the following steps :

(1) Quantification of plans in relation to production, sales, distribution and finance in terms of the goals and objectives set by the management ;

(2) Comparison of actual performance with planned performance ; and

(3) Institution of corrective and remedial action. According to the definition given by The Institute of Cost and Management Accountants,

England, budgetary control is "the establishment of departmental budgets relating the responsibilities of executives to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure by individual action the objectives of that policy or to provide a firm basis for its revision."

Uses of Budgetary System

(1) It provides a single plan for guiding the diverse elements of the organisation.

(2) It helps to plan the profit for the budget period, instead of allowing events to determine the profit.

(3) A well constructed budget is built up from the lowest level of the organisation. This naturally involves every one in the organisation and each one has his share of responsibility for carrying out assigned activities.

(4) Top management can control the operations with the help of budgets, so as to attain the best possible results. According to Horngren*, "budgeting provides definite expectations that are the best framework for judging subsequent performance."

(5) Budgeting enables the management to foresee problems and difficulties, so that management can plan suitable action to prevent or minimise such contingencies. To quote Horngren*, "Budgeting is primarily attention directing, because it helps managers to focus on operating and financial problems early enough for effective planning or action." The process of budgeting also enables the managers to become better administrators because of the extreme emphasis on planning.

(6) Budget is also a device of communicating to all concerned the goals and targets of the organisation in terms of quantities of money.

(7) Budgeting as a process also helps to motivate the managers to perform their duties for the achievement of the overall goals of the organisation.

(8) Budgeted standards for measuring the performance of individuals are better than historical standards hitherto used, as the former take into account current conditions and current plans.

(9) Budgeting provides for a coordinated effort and ensures harmony between the overall objectives of the organisation and the objectives of its parts.

Types of budgets. One way to classify budgets is based on time span. Budgets are prepared for long periods when deciding on the location of plant or adding a product line or the purchase of new machinery [illegible] equipment. Such long-range budgets are called capital budgets. [illegible] which are prepared on an annual basis to develop an overall [illegible] for the organisation are known as master budgets. A [illegible] master budget is known as continuous budget. Under [illegible] ting, there is a continuous plan for a 12-month period ahead. [illegible] if a master budget is prepared for the calendar year 198[illegible]

* Accounting for Management Control—An introduction [illegible]

January 1980, January 1981 is included, so that there is again a budget for a 12-month period.

The master budget can be sub-divided into four parts. They are : (1) An operating budget giving details of operations and the estimated income. To enable the preparation of the operating budget the several functional departments such as sales and production prepare their own budgets known as functional budgets. A functional budget relates to any of the functions of an undertaking such as production, sales or distribution, (2) A cash budget* showing the anticipated receipts and payments for the year, (3) A working capital budget showing the estimated requirements of working capital by estimating the current assets and current liabilities on the average and (4) A capital expenditure budget* which deals with proposed changes in fixed assets and how such changes will be financed.

Budgets are also classified as basic budgets drawn for a longer period of time and current budgets which are established for use over a short period of time and are related to current conditions.

Organisation for budgetary control. There is usually a budget officer in charge of the preparation of budgets. He is assisted by a budget committee consisting of top managers of several functional departments. The budget committee prepares the guidelines and coordinates the various functional budgets to resolve any differences or inconsistencies. Usually the accounts department provides the figures of past results for guidance and plays a vital role in the operation of the budgetary control system. To help the various persons concerned, the organisation will have a budget manual, a document which sets out the responsibilities of the persons engaged in the routine of and the forms and records required for budgetary control.

The key factor. The exercise on budgeting starts with the consideration of 'Key factor' or 'Principal budget factor'. The principal budget factor is the factor, the extent of whose influence must first be assessed in order to ensure that the functional budgets are reasonably capable of fulfilment. The principal budget factor may be sales, skilled labour, imported raw material, a particular machine and such other constraints.

Working capital budget. Working capital comprises of funds which are employed in day-to-day carrying on of the business. A manufacturing organisation, for instance, requires funds to buy raw materials, to keep stocks and also permit credit sales as it is very difficult to get immediate cash for sales in many businesses. Part of the funds are also locked up in work-in-progress because at any point of time one cannot avoid goods being in the course of manufacture. Some cash must always be maintained in order to be in a position to meet immediate obligations. Therefore, gross working capital may be taken as equal to cash balance, and the amounts locked up in the stocks of raw materials, work in process, and finished goods and sundry debtors However, part of the working capital is financed by current liabilities such as sundry creditors, bills payable and creditors for expenses. Therefore, the net working capital is

* These are also examples of functional budgets.

equal to current assets less current liabilities. Part of this is financed from permanent funds and the balance is borrowed from banks or from public by way of deposits.

Working capital is also called 'circulating capital' because of the flow of working capital. Cash is the starting point for this flow. Cash is spent to buy materials and pay for expenses. This results in the production of goods which, when sold will bring in cash. In the case of credit sales, sale of goods immediately results in book debts and book debts after collection get converted into cash. It is very essential to remember that all working capital must ultimately be converted into cash. To the extent it is not so converted, it must be noted, that profit is not realised. For example if part of the book debts are not realised, to that extent profit is not realised. It is easy for the students to understand that the amount not so realised is bad debts and reduces the profit made

Requirements of working capital. Many companies, which have been well conceived, have come to grief because of insufficient working capital. The products and markets may be good, but unless the organisation has sufficient working capital, it has to restrict its activities A successful organisation will always find its working capital steadily increasing, while decreasing working capital of an organisation indicates corporate sickness. Therefore [illegible] provide for adequate working capital, [illegible] pay due attention in exercising proper [illegible] According to Schall and Haley*, "Managing current assets requires more attention than managing plant and equipment expenditures .Mismanagement of current assets can be costly. Too large an investment in current assets means tying up capital that can be more productively used elsewhere .On the other hand, too little investment can also be expensive. For example, insufficient inventory may mean that sales are lost since the goods that a customer wants to buy are not available. The result is that financial management spends a large percentage of their time managing current assets because these assets vary quickly and a lack of attention paid to them may result in appreciably lower profits for them" Otherwise the organisation has to restrict its activities and must come to grief ultimately. The general misconception regarding the working capital is that it must be adequate to meet the current liabilities. If it is so then how the organisation will be in a position to carry on the day-to-day activities such as payment of wages, expenses and purchase of materials. That is why it is felt that current ratio or working capital ratio should be 2 : 1 which means that current assets should at least be twice the amount of current liabilities. The implication of this ratio is that half of the current assets are financed by current liabilities and the rest must come from permanent funds In other words, permanent funds must not only provide for fixed assets but must also be sufficient to provide for half of the current assets. During periods of expansion the organisation must provide for additional working capital. Expansion of business without obtaining additional working capital can create severe complications for the business. Losses operating and non-operating, acquisition of fixed assets and payment of long-term liabilities, payment of excessive dividends will all result in the erosion of working capital.

* Introduction to Financial Management—*Schall and Haley*—T.M.H. edition

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The requirements of working capital very much depend on the following factors :

1. *General nature and type of business.* Businesses engaged in manufacturing require relatively more working capital than those engaged in distribution trades. Businesses engaged in the manufacture of capital goods require relatively more working capital than businesses engaged in the manufacture of consumer goods because of a longer operating cycle. A transport organisation practically needs no working capital except for the amount needed for spares and accessories. Its daily collections far exceed the daily expenses. Similarly, agency houses and retail businesses require relatively less working capital.

2. *Period of operating cycle.* The longer the operating cycle more is the requirement of working capital. The period of operating cycle may be taken as the time interval between the date the goods are purchased and the date when the goods are sold. If the goods are sold on credit one should also add the credit allowed to debtors. The most important component of the cycle is the time taken to manufacture which is fairly long in the case of industries producing capital goods.

3. *Size of the undertaking.* Greater the size of the undertaking, greater will be the requirement of working capital. This is for the simple reason that greater amount will be locked up in inventory and debtors.

4. *Terms of purchase and sale.* Terms of purchase and sale determine the quantum of debtors and creditors. A business which enjoys longer period of credit from its suppliers needs relatively less working capital. Likewice a business which allows lesser period of credit to its customers needs relatively less working capital.

5 *Turnover of inventories.* A business which has rapid turnover of stocks will need lesser amount of working capital than one with slow moving stocks. For example, if one business has a stock turnover ratio of 6, its average stocks will correspond to 2 months' cost of sales. If there is another business with a stock turnover ratio of 4, its average stocks will correspond to 3 months' cost of sales. Stock being one of the items of working capital, naturally the first business with a stock turnover of 6 needs relatively less amount of working capital. It is with a view to reduce stocks that many businesses offer what are called off-season discounts. The best example is that of fans. The sale of fans is quite rapid during summer. During other seasons the inventory accumulates and in order to rotate the stocks, most of the fan-makers offer special discounts during off-season.

6. *Business condition.* During periods of favourable business the demand for working capital is more and the current ratio may appear even unfavourable, whereas during periods of recession, business activity is reduced leading to reduction in inventories and accounts receivable and the current ratio will give an impression of being favourable.

Estimation of working capital requirements. Quite often a business is faced with the problem of estimating the working capital requirements. The best way to do it is to ascertain the amount of each item of current assets and current liabilities and then find out the excess of current assets

over current liabilities. Here, again, it should be remembered that the objective of the management in preparing this budget is to ascertain the requirement of working capital finance so that ways and means of raising such finance can be explored beforehand. However, the requirement of working capital cannot be uniform and varies from time to time. Therefore, the amount should be determined with reference to the point of time when the demand for working capital is heaviest. In other words, the amount should be determined in relation to the worst moment of business operations, considered from the angle of finance. This is known as the 'worst moment' concept of working capital requirement. The procedure for estimating each of the items and the information required for the purpose is discussed below after which a few illustrations are given.

Raw materials. The amount is estimated on the basis of cost of raw materials, the period during which raw materials will remain in stock before being issued to production and the monthly requirement depending on production.

Work-in-process. Here again the time for which goods will be in the course of manufacture is the most vital information. For this period one has to take into account the amount needed by way of materials, wages and overheads having regard to the quantum of production. If wages and overheads accrue evenly during the time manufacture is in progress then, on average, the total cost of labour and overheads is outstanding only for half the time.

Finished goods. Here again the vital information is the period during which finished goods will remain in warehouse. Suppose the yearly output is 10,400 units, finished goods are in stock on an average for six weeks and the cost of production is Rs 20 per unit, then the figure of stocks will be

$$\frac{10,400}{52} \times 6 \times \text{Rs. } 20 = \text{Rs. } 24,000.$$

Sundry debtors. The vital information is the lag in payment of debtors and the credit sales per month. If the lag in payment is 2 months and the credit sale per month is Rs. 10,000, then the amount of sundry debtors would be Rs. 20,000. For the purpose of calculating the working capital requirement some people estimate the book debts less the profit element while others take it at full value. Naturally, the estimates made differ because of this factor.

Cash and bank balances. From past experience every business knows the amount of cash float that it should carry to meet the day-to-day payments. Normally, the amount is given in the problem and poses no difficulty to the student.

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Creditors for expenses. The lag in payment of wages and expenses and the amount to be spent per unit of time towards these items are needed

for estimating these amounts. If, for example, there is a lag of 2 weeks in the payment of wages and the weekly wages (having regard to production) are Rs. 2,000, then creditors for wages would be Rs. 4,000. Similarly, one can calculate the figure of creditors for expenses.

Illustration 1. *X* wishes to commence a new trading business and gives the following information :

(1) The total estimated sales in a year will be Rs. 12,00,000.

(2) His expenses are estimated at a fixed expense of Rs. 2,000 per month plus a variable expense equal to 5% of his turnover.

(3) He expects to fix a sale price for each product which will be 25% in excess of his cost of purchase.

(4) He expects to turnover his stock 4 times in the year.

(5) The sales and purchases will be evenly spread throughout the year. All sales will be for cash but he expects one month's credit for purchases.

Calculate his average working capital requirements.

(Adapted from C.A. Final May 1973)

ESTIMATION OF AVERAGE WORKING CAPITAL

Stocks	2,40,000
Cash	7,000
	2,47,000
Less : Sundry creditors	80,000
Net working capital	1,67,000

Tutorial Notes

(1) Stock turnover Ratio = 4

$$\text{Stock turnover} = \frac{\text{Cost of sales}}{\text{Average stock}}$$

$$\therefore \quad \text{Average stock} = \frac{\text{Cost of sales}}{\text{Stock turnover}}$$

$$\text{Cost of sales} = \text{Sales} - \text{G. P.}$$

$$= \text{Rs. } 12{,}00{,}000 - 20\% \text{ of Rs. } 12{,}00{,}000$$

$$= \text{Rs. } 9{,}60{,}000$$

$$\therefore \quad \text{Average stock} = \frac{\text{Rs. } 9{,}60{,}000}{4}$$

$$= \text{Rs. } 2{,}40{,}000.$$

(2) Sundry creditors

Sundry creditors represent one month purchases *i.e.*, 1/12th of Rs. 9,60,000 Rs. 80,000

(3) Cash

It is expected that minimum cash balance will cover the expenses :

	Rs.
Fixed expenses	2,000
Variable expenses	5,000
	7,000

Illustration 2. The Board of Directors of Nanak Engineering Company Private Ltd request you to *prepare a statement showing the working* capital requirements forecast for a level of activity of 1,56,000 units of production.

The following information is available for your calculation :

(*a*)

	Per unit Rs.
Raw materials	90
Direct labour	40
Overheads	75
	205
Profits	60
Selling price per unit	265

(*b*) (*i*) Raw materials are in stock on average one month.

(*ii*) Materials are in process, on average 2 weeks.

(*iii*) *Finished goods are in stock, on average 1 month.*

(*iv*) Credit allowed by suppliers one month.

(*v*) Time lag in payment from debtors two months

(*vi*) Lag in payment of wages 1½ weeks.

(*vii*) Lag in payment of overheads is one month.

20% of the output is sold against cash. Cash in hand and at bank is expected to be Rs. 60,000. It is to be assumed that production is carried on evenly through out the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month.

[C.A. (Final) November 1974]

Solution.

ESTIMATION OF WORKING CAPITAL

		Rs.
Current Assets :		
(1) Cash in hand and at bank		60,000
(2) Stocks :		
Raw materials	10,80,000	
Work-in-process	8,85,000	
Finished goods	24,60,000	
		44,25,000
(3) Sundry debtors		50,88,000
		95,73,000

Less : Current Liabilities		
(4) Sundry creditors	10,80,000	
Wages payable	1,80,000	
Expenses payable	9,00,000	
		21,60,000
Net working capital required		74,13,000

TUTORIAL NOTES

(1) Raw materials

$$\frac{1,56,000}{52} \times 4 = 12,000 \text{ will be in stock}$$

Value 12,000 × Rs. 90 Rs. 10,80,000

(2) Work-in-process

Raw materials	6,000 units @ Rs. 90·00	= 5,40,000
Wages	6,000 units @ Rs. 20·00	= 1,20,000
Overheads	6,000 units @ Rs. 37·50	= 2,25,000
Total		8,85,000

Materials are in process, on average 2 weeks, *i.e.*, 6,000 units. It is given that wages and overheads accrue evenly on average, therefore only half the wages and overheads only are included in the work-in-process.

	Rs.
(3) Finished goods	
One month stock, *i.e.*, 12,000 units @ Rs. 205	24,60,000

(4) Sundry debtors :

Total units sold in 2 months	24,000	
Less Cash sales 20%	4,800	
Units sold on credit	19,200	
Value of 19,200 units at Rs. 265		50,88,000

Sometimes profit is eliminated in this calculation in which case the requirement would be Rs. 205 for 19,200 units, *i.e.*, Rs. 39,36,000.

(5) Sundry creditors 12,000 units @ Rs. 90 each	10,80,000
(6) Wages payable 4,500 units @ Rs. 40 each	1,80,000
(7) Expenses payable 12,000 units @ Rs. 75 each	9,00,000

Illustration 3. A proforma cost sheet of a company provides the following particulars :

Eelemnt of Cost	Amount per unit Rs.
Raw material	80
Direct labour	30
Overheads	60
Total cost	170

Profit	30
Selling price	200

The following further particulars are available :

Raw materials are in stock on average one month. Materials are in process, on average, half a month. Finished goods are in stock on average one month.

Credit allowed by suppliers is one month. Credit allowed to debtors [illegible] weeks. Lag in payment [illegible]

One-fourth of the output is sold against cash. Cash on hand and at bank is expected to be Rs. 25,000.

You are required to prepare a statement showing the working capital needed to finance a level of activity of 1,04,000 units of production

You may assume that production is carried on evenly throughout the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month. **(C.A. Final November 1971)**

Solution.

ESTIMATION OF WORKING CAPITAL

Current Assets		Rs.
Cash at Bank (as given)		25,000
Raw materials		6,40,000
Work-in-progress		5,00,000
Finished goods		13,60,000
Sundry debtors		24,00,000
Total		49,25,000
Less : Current Liabilities		
Sundry creditors	6,40,000	
Creditors for expenses		
Wages	90,000	
Overheads	4,80,000	
		12,10,000
Net working capital required		37,15,000

Workings :

(1) Raw materials

Weekly production and sale $\frac{1,04,000}{52}=2,000$ units. Raw materials stock on average one month.

$\therefore$ $2,000\times4\times$ Rs. 80 per unit Rs. 6,40,000

(2) Work-in-progress

Materials (2 weeks) $2,000\times2\times80=3,20,000$

Wages and overheads	4,000 × 45 = 1,80,000	
		5,00,000
(3) Finished goods 8,000 units @ Rs. 170 per unit		13,60,000
(4) Sundry debtors		
Total sales units	16,000	
Less : Cash sales	4,000	
	12,000	
Credit sales 12,000 units @ Rs. 200 per unit		24,00,000

Alternatively the requirement of sundry debtors may be estimated on cost basis in which case the figure works out to :

12,000 × Rs. 170 = Rs. 20,40,000.

(5) Sundry creditors 8,000 units @ Rs. 80 per unit	Rs. 6,40,000
(6) Wages 3,000 units @ Rs. 30 per unit	Rs. 90,000
(7) Overheads 8,000 units @ Rs. 60 per unit	Rs. 4,80,000

Alternatively the solution can be presented as follows :

(1) Weekly costs

	Rs.
Materials 2,000 units @ 80	1,60,000
Labour 2,000 units @ 30	60,000
Overheads 2,000 units @ 60	1,20,000
Total Cost	3,40,000
Profit @ Rs. 30 on 2,000 units	60,000
Sales 2,000 units @ Rs. 200	4,00,000

WORKING CAPITAL REQUIREMENTS

Weeks	*Material*	*Labour*	*Overhead*	*Profit*
Raw materials in stock	4	—	—	—
Work-in-Progress	2	1*	1*	—
Finished goods	4	4	4	—
Debtors	8	8	8	8
	18	13	13	8
Less : Creditors	4	1½	4	—
Elapsed time	14	11½	9	8
Weekly cost	1,60,000	60,000	1,20,000	60,000

∴ Finance required 22,40,000 + 6,90,000 + 10,80,000 + 4,80,000

Cash float + Rs. 25,000

Total finance required	Rs. 45,15,000
Less : Cash sales 4,000 units @ Rs. 200	8,00,000
Working capital required	37,15,000

* Since wages and overheads accrue evenly, only half the period is taken into account.

Another alternative presentation is shown on page FSA-246

Illustration 4. Prepare estimate of working capital as at the end of the year from the following details :

Budgeted sales for the year	Rs. 10,00,000
Ratio of cash to credit sales	1 : 4
Debtors velocity	1·875 months
Creditors velocity	1 month
Estimated gross profit	25% on sales
Proprietary ratio to fixed assets	0·75
Operating ratio	90%
Direct expense ratio	80%
Stock velocity	5
Time lag for all expenses (other than wages)	36 days
Liquidity ratio	2 : 1
Net profit to proprietors' fund	12·5%

Closing stock level will be 50% more than the opening stock.

Solution.

(A) *TUTORIAL NOTES*

(1) Sundry debtors

Debtors velocity (in months)

$$= \frac{\text{Sundry debtors}}{\text{Credit sales}} \times 12$$

$$\text{Sundry debtors} = \frac{\text{Credit sales} \times \text{Debtors velocity}}{12}$$

$$= \frac{8,00,000 \times 1{\cdot}875}{12} = \text{Rs. } 1,25,000$$

(2) Stock

$$\textit{Stock velocity} = \frac{\text{Cost of sales}}{\text{Average stock}}$$

$$\text{Average stock} = \frac{\text{Cost of sales}}{\text{Stock velocity}}$$

$$= \frac{\text{Sales} - \text{G.P.}}{\text{Stock velocity}}$$

$$= \frac{10,00,000 - 2,50,000}{5} = \text{Rs. } 1,50,000$$

$$\text{Average stock} = \frac{\text{Opening stock} + \text{Closing stock}}{2}$$

If the opening stock is assumed to be x, then the closit be $1{\cdot}5\,x$.

WORKING CAPITAL REQUIREMENTS

		Period (weeks)	Total Rs.	Raw materials Rs.	W.I.P. Rs.	Finished stock Rs.	Debtors Rs.	Creditors Rs.
1.	*Materials* :							
	(a) In stock	4		6,40,000				
	(b) In work-in-progress	2			3,20,000			
	(c) In finished goods	4				6,40,000		
	(d) Credit to debtors	8					9,60,000	
		18						
	(e) Credit from creditors	4						6,40,000
		14	19,20,000					
2.	*Wages* :							
	(a) In work-in-progress	1			60,000			
	(b) In finished goods	4				2,40,000		
	(c) Credit to debtors	8					3,60,000	
		13						
	(d) Credit from employees	1½						90,000
		11½	5,70,000					
3.	*Overheads* :							
	(a) In work-in-progress	1			1,20,000			
	(b) In finished goods	4				4,80,000		
	(c) Credit to debtors	8					7,20 000	
		13						
	(d) Credit from others	4						4,80,000
		9	8,40,000					
4.	*Profit* : Credit to debtors	8	3,60,000				3,60,000	
	Total		36,90,000	6,40,000	5,00,000	13,60,000	24,00,000	12,10,000

Requirement of working capital per above statement Rs. 36,90,000

Cash float required

$\therefore$ Average stock $= \dfrac{x+1\cdot5x}{2} = 1\cdot25x$

$1\cdot25x =$ Rs. 1,50,000

$= \dfrac{1,50,000}{1\cdot25} =$ Rs. 1,20,000

Closing stock = Rs. 1,20,000 + 50% of Rs. 1,20,000
= Rs. 1 80,000

(3) Trade creditors

Purchases = Cost of goods sold + Closing stock − Opening stock
= Rs. 7,50,000 + Rs. 1,80,000 − Rs. 1,20,000
= Rs. 8,10,000

Creditors velocity (in months)

$= \dfrac{\text{Trade creditors}}{\text{Credit purchases}} \times 12$

Trade creditors

$= \dfrac{\text{Credit purchases} \times \text{Creditors velocity}}{12}$

$= \dfrac{8,10,000 \times 1}{12} =$ Rs. 67,500

(4) Creditors for expenses

Other expenses ratio = Operating ratio − Direct expense ratio
= 90% − 80% = 10%

viz., 10% of Rs. 10,00,000 = Rs. 1,00,000.

As these expenses are outstanding for 36·5 days the amount outstanding would be Rs. $\dfrac{1,00,000 \times 36\cdot5}{365} =$ *Rs. 10,000.*

(5) Cash

Liquidity ratio 2 : 1

Current liabilities	Rs.
Sundry creditors	*67,500*
Creditors for expenses	10,000
	77,500

Liquid assets = 77,500 × 2 = Rs. 1,55,000.

As liquid assets comprise cash and debtors cash will be equal to liquid assets minus sundry debtors

= Rs. 1,55,000 − Rs. 1,25,000 = Rs. 30,000.

(6) Proprietary funds

Net profit to proprietors fund = 12·5%

Net profit = 10% of sales
= 10% of Rs. 10,00,000
= Rs. 1,00,000

$\therefore$ Proprietors fund $= \dfrac{1,00,000}{12\cdot5} \times 100 =$ Rs. 8,00,000

(7) Working capital from out of proprietary fund
20% of Rs. 8,00,000=Rs. 1,60,000

(B) working capital budget

Gross working capital (current assets)

Cash		Rs. 30,000
Debtors		1,25,000
Stock		1,50,000
		3,05,000
Less : Current liabilities		
Trade creditors	67,500	
Expense creditors	10,000	77,500
Net working capital		2,27,500
Working capital to be procured :		
Net working capital as above		2,27,500
Less : Financed by permanent funds		1,60,000
		Rs. 67,500

The amount can be arranged from borrowed funds because even after the borrowing, current ratio would be in the range of 2 : 1 as shown below :

Current assets=Rs. 3,05,000

Current liabilities after borrowing

=Rs. 77,500+67,500=Rs. 1,45,000

Ratio=3,05,000 : 1,45,000

=2·1 : 1

PREPARATION OF MASTER BUDGET

Master budget is the summary budget incorporating its component functional budgets. Thus, sales budget, production budget and cash budget are subsidiary to master budget. Master budget projects the complete range of activities of the business for the budgeted period. Master budget usually comprises budgeted profit and loss account showing the estimated profit for the budget period, the budgeted balance sheet showing the financial position at the end of the budget period and the supporting schedules. Master budget, after it is prepared by the budget committee, has to be approved by the Board of Directors. Once it is approved it provides the basis for action. It is against the budgeted standards that performance of the organisation is subsequently measured.

Steps in the preparation of Master Budget. For the benefit of the students the major steps in developing a master budget are given below :

1. The first step is the formulation of basic goals and long-range plans for the company.

2. In these days of intense international competition for markets, usually sales is the principal budget factor. Therefore, the preparation of

the sales budget is the starting point, in the preparation of master budget. On the sales budget depend the production or purchases, inventory levels, cash requirements and operating expenses as all of these depend on the expected volume of sales. The preparation of sales budget involves the following points :

(a) No. of units likely to be sold for each month, (b) the prices at which they can be sold and (c) the composition of cash and credit sales in the total sales.

3. The next budget to be taken up is the purchase budget. The quantum of purchases can be determined with reference to cost of sales and the opening and closing inventories. It may be expressed in the following formula.

Purchases = Cost of sales + Increase in stocks or
= Cost of sales − Decrease in stocks

4. Estimating the operating expenses for budgeting there must be a thorough knowledge of the fixed and variable expenses. Variable expenses such as wages, sales commission and the like are influenced by sales

where goods are manufactured, standard costs are very helpful in estimating the production costs.

5. The preparation of cash budget is the next important step, because cash flow forecasts influence the assets, liabilities and sometimes share capital if issue of shares is planned as a result of cash shortage. This budget is also helpful to determine the interest payments, if any.

have enough informa-

ed balance sheet at the end of the budget period. This involves the use of information generated from all the preceding steps.

Illustration 5. From the data given below prepare a master budget for Jaya Govinda Limited for the next four months beginning January 1, 1980.

(1) There must be a minimum cash balance of Rs. 10,000 each month.

(2) Actual and budgeted sales :

Actuals	(1979) Rs	Budget	(1980) Rs.
October	40,000	January	60,000
November	30,000	February	60,000
December	25,000	March	40,000
		April	40,000
		May	50,000

Sales are collected as follows :

40% of sales in the month of sale.
40% of sales in the next month.
20% of sales in the month thereafter.

(3) At the end of any month, the company wishes to maintain a basic inventory of Rs. 20,000 plus 80% of the cost of goods to be sold in the following month. The cost of goods sold is 70% of sales. 50% of

the purchases are paid for during the month and the balance during the following month.

(4) Monthly operating expenses are as follows :

Wages	Rs. 3,000
Commission	10% of sales
Rent	Rs. 200
Miscellaneous expenses	Rs. 2,000
Depreciation	Rs. 400

Wages and commission are paid at a time lag of half a month. For this purpose sales may be taken as uniform throughout the month. Rent is paid at the beginning of the month and miscellaneous expenses as and when they are incurred.

(5) The company desires to maintain a minimum cash balance of Rs. 10,000 at the end of each month. Money can be borrowed or repaid in multiples of Rs. 1,000 at an interest rate of 12% per annum. The policy of the management is to borrow minimum cash needed and to repay at the earliest opportunity. Interest is paid together with principal. While borrowings are made at the beginning of the month, repayments are made at the end of the month.

(6) The financial position of the business on 31st December, 1980 is as under.

Liabilities		Rs.	*Assets*		Rs.
Share capital		50,000	Cash		10,000
Reserve and surplus		28,700	Book debts		21,000
Current liabilities			Inventory		53,600
Trade creditors	18,550		Plant and equipment		
Wages	1,500		Balance	18,000	
Commission	1,250	21,300	*Less* : Dep. reserve	2,600	15,400
		Rs. 1,00,000			Rs. 1,00,000

You are required to prepare a master budget for the four months period ending with 30th April, 1980 together with the supporting schedules.

Solution :

(I) CASH BOOK

	January Rs.	*February* Rs.	*March* Rs.	*April* Rs.
Balance at start	10,000	10,000	10,300	18,580
Cash receipts (Schedule 2)	40,000	53,000	52,000	44,000
Total Rs.	50,000	63,000	62,300	62,580
Payments :				
Trade creditors (Schedule 4)	39,550	36,400	29,400	30,800
Wages and commission (Schedule 6)	7,250	9,000	8,000	7,000
Rent	200	200	200	200
Misc. expenses	2,000	2,000	2,000	2,000
Total	49,000	47,600	39,600	40,000
Cash float	10,000	10,000	10,000	10,000
Total requirement	59,000	57,600	49,600	50,000

Surplus/Deficiency		(9,000)	5,400	12,700	12,580
Borrowing/Repayment		9,000	(5,000)	(4,000)	—
Interest paid		—	(100)	(120)	—
Balance after borrowing or repayment	Rs.	10,000	10,000	18,580	22,580

(II) BUDGETED PROFIT AND LOSS ACCOUNT

for the 4 months ending 30-4-1980

	Rs.		Rs
To Opening stock	53,600	By Sales	2,00,000
To Purchases	*1,34,400*	*By Closing stock*	48,000
To Wages and commission	32,000		
To Rent paid	800		
To Misc. expenses	8,000		
To Interest	220		
To Depreciation	1,600		
To Net profit	17,380		
Rs.	2,48,000	Rs	2,48,000

The above account can also be presented in a vertical form.

BUDGET PROFIT AND LOSS ACCOUNT

for the four months ending 30th April, 1980

	Rs.	Rs.
Sales (Schedule 1)		2,00,000
Cost of goods sold (Schedule 3)		1,40,000
Gross margin		60 000
Less : Operating expenses :		
Wages and commissions (Schedule 5)	*32,000*	
Rent	800	
Miscellaneous expenses	8,000	
Depreciation	1,600	
		42,400
Operating income		17,600
Less : Interest paid		220
Net income	Rs.	17,380

(III) BUDGETED BALANCE SHEET

as on 30th April, 1980

Liabilities		Rs	*Assets*		Rs.
Share capital		50,000	Fixed assets :		
Reserves and surplus :			Plant and equipment		
Balance	28,700		balance	18,000	
Profits	17,380		*Less* . Depreciation		
		46,080	reserve	4,200	
Current liabilities :					13,800
Trade creditors	16,800†		Current assets :		
Wages	1,500††		Stocks		48,000*
Commission	2,000†††		Book debts		32,000**
		20,300	Cash		22,580***
	Rs.	1,16,380		Rs.	1,16,380

		Rs.
*Basic stock		20,000
80% of cost of goods sold of May (·7×·8×50,000)		28,000
	Rs.	48,000
**Credit sales of April		24,000
One-third of credit sales of March		8,000
	Rs.	32,000

*** Figure as per cash budget.

†50% of purchases for the month of April

††50% of the wages for the month of April

†††50% of the commission for the month of April

IV. SUPPORTING SCHEDULES

Schedule (1) Sales Forecast

	November	*December*	*January*	*February*	*March*	*April*
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Cash sales (40%)	12,000	10,000	24,000	24,000	16,000	16,000
Credit sales (60%)	18,000	15,000	36,000	36,000	24,000	24,000
Rs.	30,000	25,000	60,000	60,000	40,000	40,000

Junuary—April total Rs. 2,00,000.

Schedule (2) Cash Collections

	January	*February*	*March*	*April*
	Rs.	Rs.	Rs.	Rs.
Cash sales of current month	24,000	24,000	16,000	16,000
Collection of credit sales of last month	10,000	24,000	24,000	16,000
Collection of credit sales of the month preceding last month	6,000	5,000	12,000	12,000
Rs.	40,000	53,000	52,000	44,000

Schedule (3) Purchases

	December	*January*	*February*	*March*	*April*
	Rs.	Rs.	Rs.	Rs.	Rs.
Stock at close	53,600	53,600	42,400	42,400	48,000
Cost of goods sold	17,500*	42,000	42,000	28,000	28,000
Total	71,100	95,600	84,400	70,400	76,000
Less : Stock at beginning	34,000**	53,600	53,600	42,400	42,400
Purchases	37,100	42,000	30,800	28,000	33,600

Purchases January—April total	Rs.	1,34,400
Cost of sale January--April total		1,40,000

* 70% of December sales=70/100×25,000=Rs. 17,500

** Basic inventory		=Rs. 20,000
80% of cost of goods sold of December (·7×·8×25,000)		14,000
	Rs.	34,000

Schedule (4) Payments for Purchases

	January	February	March	April
	Rs.	Rs	Rs.	Rs.
50% of the purchases of previous month	18,550	21,000	15,400	14,000
50% of the current purchases	21,000	15,400	14,000	16,800
Rs.	39,550	36,400	29,400	30,800

Schedule (5) Wages and Commission

	December	January	February	March	April
	Rs.	Rs	Rs.	Rs.	Rs.
Wages (fixed)	3,000	3,000	3,000	3,000	3,000
Commission (10% of sales)	2,500	6,000	6,000	4,000	4,000
Rs.	5,500	9,000	9,000	7,000	7,000

January—April total Rs. 32,000.

Schedule (6) Payments for Wages and Commission

	January	February	March	April
	Rs	Rs.	Rs.	Rs.
50% of last month's expense	2,750	4,500	4,500	3,500
50% of current month's expenses	4,500	4,500	3,500	3,500
Rs	7,250	9,000	8,000	7,000

Objective Type Questions

I. State whether the following statements are 'true' or 'false'

(*a*) A working capital budget is a budget that lays down the planned requirements of working capital.

(*b*) A budget is a prediction of what will happen as the result of a given set of circumstances.

(*c*) Plant capacity is the principal budget factor, because the whole exercise of budgeting depends on this

(*d*) Working capital is the amount borrowed from banks and public for the purpose of meeting expenses incidental to day-to-day operations.

(*e*) Working capital is the amount which is required to meet current liabilities.

(*f*) A business which has rapid turnover of stocks needs relatively large amount of working capital.

(*g*) A budget is a plan of the management for a future period expressed in quantitative terms.

(*h*) Capital budget is a plan for expenditure on plant and equipment or on new product lines for longer periods of 5 to 10 years.

II. Fill in the blanks

(*a*) Working capital is the excess of current assets over... . . ... .

(*b*) A budget may be defined as a... ... ...expression of a business plan for a specified future period usually a year.

(*c*) Master budget is the summary budget which incorporates the component... ... .

(*d*) A master budget is the... ... ...plan drawn up by the organisation for the budget period.

(*e*) A capital expenditure budget deals with proposed changes in ... ...and how such changes will be financed.

(*f*) A part of the working capital must be provided from... ... .

(*g*) The longer the operating cycle... ... ...is the requirement of working capital.

(*h*) A business which has rapid turnover of stocks will need... ... ... amount of working capital than one with slow moving stocks.

III. **Indicate the correct answer :**

(*a*) Working capital is the sum equal to
- (*i*) Current assets
- (*ii*) Current liabilities
- (*iii*) Current assets less current liabilities.

(*b*) A steady increase in working capital indicates
- (*i*) Successful business
- (*ii*) Corporate sickness
- (*iii*) None of the above.

(*c*) Working capital ratio is
- (*i*) Current ratio
- (*ii*) Liquidity ratio
- (*iii*) Stock turnover ratio.

(*d*) If the currrent assets are Rs. 75,000, current liabilities are Rs. 25,000 then the working capital figure is
- (*i*) Rs. 75,000
- (*ii*) Rs. 25,000
- (*iii*) Rs. 50,000.

(*e*) A firm can reduce its working capital requirement
- (*i*) by allowing longer period of credit to customers
- (*ii*) by obtaining shorter period of credit from suppliers
- (*iii*) by allowing shorter period of credit to customers and obtaining longer period of credit from suppliers.

(*f*) The longer the operating cycle of a business
- (*i*) greater is the requirement of working capital
- (*ii*) smaller is the requirement of working capital
- (*iii*) None of the above.

(*g*) Master budget becomes an executive order after it is approved by
- (*i*) Budget officer (director)
- (*ii*) Budget committee
- (*iii*) Board of directors.

(*h*) If a business has rapid turnover of stocks it needs

(*i*) more working capital
(*ii*) less working capital
(*iii*) none of the above.

Questions

1. What are the benefits of budgeting ?

2. Why do you consider budgeted standards superior to historical standards as a basis for judging performance ?

3. What is a master budget and why is it important ?

4. What is a working capital budget ?

5. Distinguish between a forecast and budget.

6. Explain the importance of principal budget factor in budgeting.

7. Explain the role of budget committee in the budget process.

8. What are the steps involved in budgetary control ?

9. 'Budgeting is an exercise in uncertainty and is therefore futile.' Comment.

10. What factors influence the requirement of 'working capital' finance.

11. If you are asked to estimate the working capital requirements of a project, how do you preceed with your job.

Problems

WORKING CAPITAL BUDGET

1. From the following information prepare a statement showing the working capital requirements.

Budgeted sales Rs. 5,20,000

The cost of production and sale price of one unit is as under :

	Rs.
Raw materials	30
Direct labour	40
Overheads	20
Total cost	90
Profit	10
Sale Price	100

Additional information :

(1) Raw materials are carried in stock for three weeks and finished goods for two weeks.

(2) Factory processing will take three weeks.

(3) *Suppliers will give 5 weeks' credit* and *customers will require eight weeks' credit.*

(4) It may be assumed that production and overheads accrue evenly throughout the year.

(Adopted from M.Com. Madras university)

(Rs. 1,10,000 ; If book debts are taken at cost pricaofugoods Rs. 1,02,000)

2. You are asked to estimate the working capital requirements of a production unit on the basis of the information given below.

Raw material costs	Rs. 75 per unit
Labour	Rs. 58·5 per unit
Overheads	Rs. 15,00,000 per annum
Output and sales	10,000 units per month
Selling price	Rs. 150 per unit

Buffer stocks to be carried

Raw material : 2 weeks production

Finished goods : 3 weeks supply

The debtors on average take 2·25 months credit.

Raw material is received in uniform deliveries daily and suppliers have to be paid at the end of the month goods are received.

Other trade creditors allow an average of 1½ months' credit.

Calculate the working capital for the month of February and for this purpose you may assume that a month is a four week period,

(Rs. 46,57,500)

3. From the following information taken from the budget of Kanchan Ganga Ltd, prepare a statement showing the average amount of working capital required by the company.

Annual sales are estimated at 36,000 units at Rs. 10 per unit. Production quantities coincide with sales and will be carried on evenly thoughout the year, and the production cost is

	Rs.	
Materials	5·00	per unit
Labour	2·00	per unit
Expenses	1·75	per unit

Customers are given 60 days' credit, and 50 days' credit is taken from suppliers.

Forty days' supply of raw materials and 15 days' supply of fiinished goods are kept.

The production cycle is 20 days and all material is issued at the commencement of each production cycle.

A cash balance equivalent to one-third of the average other working capital requirements is kept for contingencies.

Assume that year comprises 360 days.

(Rs. 1,09,167)

4. From the following information prepare a working capital requirement forecast and a forecast of profit and loss accouut as well as balance sheet.

	Rs.
Issued capital	1,00,000
5% Debentures (secured)	35,000
Fixed assets value on 1st January	65,000

Production during the year is to be 60,000 units including requirements for finished goods stock but not including work-in-progress.

The expected ratios of cost to selling prices are :

Raw materials 60%. Direct wages-10% Overheads 20% (which include 10% depreciation on fixed assets at cost). Raw materials are expected to remain in stores for an average of two months before issue to production. Each unit of production is expected to be in process for one month. Finished goods will stay in the warehouse awaiting despatch to customers for approximately three months (3 months production).

Credit allowed by creditors is two months from the date of delivery of raw materials. Credit given to customers is three months from the date of despatch. Selling price is Rs. 4 per unit. There is a regular production and sales cycle.

(M. Com. Madras April 1973)

(Working capital requirement Rs. 1,05,180. Less amount available form long term funds Rs. 71,000. Net amount needed Rs. 35,180.)

5. Swaranjani Cosmetics Limited is planning a new project. You are required to prepare a working capital budget from the information given below.

(1) Weekly sales 8,000 units at Rs. 12 per unit.

(2) Credit given to customers 6 weeks.

(3) Unit costs :

	Rs.
Direct materials	5
Direct labour	2
Overheads	16,000 per week

(4) Inventories

Raw materials	Rs. 1,20,000
Finished goods	40,000 units

(5) Lag in payment of overheads 4 weeks.

(6) Credit allowed by suppliers 4 weeks.

(7) Wages are paid at the end of every week.

(8) Units are in process for a period of 2 weeks.

(9) A cash float of Rs. 24,000 is considered desirable.

(10) Profit is remitted to the parent organisation at the moment of sale.

(11) A month is a four-week period.

(Working Capital required Rs. 10,00,000).

Hint. Profit may be remitted at the moment of sale or at the moment cash is paid by the debtor. In the first case debtors must be taken at a figure to include the profit element. In the second case debtors will be valued at cash cost of sales for determining the working capital.

6. The Rapid Growth Limited has been having a fast rate of growth of its sales in recent years. Control however has been poor resulting in a financial strain. The finencal position of company is as shown below :

Liabilities	*31st Dec 1971* Rs.	*31st Dec 1972* Rs.	*Assets*	*31st Dec 1971* Rs.	*31st Dec 1972* Rs.
Equity capital	2,00,000	2,00,000	Plant and Equipment	3,00,000	2,70,000
Reserves	1,00,000	1,10,000	Inventory	2,40,000	2,90,000
Bank loan	3,50,000	4,00,000	Debtors	2,00,000	3,00,000
Creditors	1,50,000	1,90,000	Cash	60,000	40,000
	8,00,000	9,00,000		8,00,000	9,00,000

The following additional data are available :

Sales during the 2 years are : 1971 ; 12,00,000; and 1972 : 13,20,000.

Purchases are 60% of sales. Inventory 3 months' requirements. Credit terms : supplies $1\frac{1}{2}$ months purchases and customers 1 month sales.

With the above data calculate the working capital requirements and then comment on the working capital of the two years.

(I.C.W.A. (Final) January 1973)

(There is no difference between the budgeted and actual figures for both the years. This has become possible because of excessive borrowings from bank which is not desirable.)

MASTER BUDGET

7. A limited company is to be formed to take over a running business. It has been decided to raise Rs. 55 lakhs by issuing equity shares, and the balance of capital required in the first six months is to be financed by a financial institution against an issue of Rs. 5 lakhs, 8 per cent debentures (interest payable annually) in its favour.

Initial outlay consists of :	Rs.
Freehold premises	25 lakhs
Plant and machinery	10 lakhs
Stock	6 lakhs
Vehicles and other items	5 lakhs

(Payments, on above items are to be made in the month of incorporation.)

Sales during the first six months ending on June 30, are estimated as under :

January	Rs. 14 lakhs	April	Rs. 25 lakhs
February	„ 15 lakhs	May	Rs. 26·50 lakhs
March	„ 8·50 lakhs	June	Rs. 28 lakhs

Lag in pa[illegible] Debtors 2 months
Creditors 1 month.

: Rs. 50,000 (payable in February).

(*b*) General Expenses : Rs. 50,000 per month, at the end of each month.

(*c*) Monthly Wages and Salaries (Payable on the first day of the next month) :

Rs. 80,000 for the first there months and

Rs. 95,000 thereafter.

(*d*) Gross profit rate is expected to be 20% on sales

(*e*) The shares and debentures are to be issued on 1st January.

(*f*) The stock level throughout is to be the same as the outlay.

Prepare C[illegible] Loss Account for [illegible] as at that dat[illegible]. [illegible]

[*Projected net profit Rs. 22·40 lakhs. Total of the balance sheet Rs. 104·80 lakhs. Estimated cash balance on 30th June Rs. 3 80 lakhs.*]

8. From the following particulars prepare a Budgeted Profit and Loss Account for the year ended 30.6.1982 and a balance sheet as on that date (cash budget is to be ignored) :

(*i*) PROFIT AND LOSS A/c
for the year ended 30.6.1981

	Rs.		Rs.
To Materials consumed	30,000	By Sales	1,00,000
To Wages (5% variable)	20,000	(10,000 units)	
To Overheads (60% fixed)	30,000		
To Profit	20,000		
	1,00,000		1,00,000

(*ii*) BALANCE SHEET
as on 30.6.1981

Share capital	46,500	Fixed assets (cost less depreciation)	50,000
Reserves and surplus	25,000	*Stock (raw materials)*	7,500
Bank overdraft	2,250	Debtors	25,000
Sundry creditors	5,000		
Outstanding wages and expenses	3,750		
	82,500		82,500

(*iii*) Information relating to the budget year ending on 30.6.1982:

(*a*) Estimated increase in selling price would be 25%. This will have the effect of reduction in volume by 20%. Sales for the

month of June 1982 will be Rs. 12,000 the remaining sales being evenly spread over the other months of the budget period.

(*b*) Estimated increase in costs : Materials—5% ; Wages (variable) —10% ; Fixed Overhead—3%.

(*c*) Overheads for the year ended 30.6.1981 include depreciation amounting to Rs. 5,000 under straight line method.

(*d*) Credit terms would be : 3 months for Debtors ; 2 months from creditors and 1 month for wages and expenses.

(*e*) Stock (raw materials) carrying policy ; Equivalent to 3 months' consumption, LIFC method will be used for pricing out the issues.

(*f*) Provision for tax may be made at 40%.

Assume that there will not be any closing stock of work-in-progress and finished goods. (All working should be neatly shown).

(*M.Com., C.U. 1980*)

[Profit after providing for taxation Rs. 16,806 ; Balance Sheet total Rs. 1,06,493 ; Bank balance (*balancing figure*) Rs. 19,993].

9. Vishwa Karma Engineering Ltd proposes to increase its output by reorganizing the factory layout, installing some additional plant and increasing the labour force. The plan is intended to be put into operation during the four months to 31st December 1976, and has the following financial implications.

(*a*) The forecast balance sheet as on 31st August 1976 is as follows :

Issued share capital		Rs. 7,00,000	Plant and machinery at cost	Rs. 6,00,000	
Reserves		1,00,000	*Less* : Depreciation	2,64,000	
Profit and loss account		1,40,000			
		9,40,000		3,36,000	
Trade creditors		85,000	Raw material stocks	1,15,000	
charges :			Work-in-progress and finished stocks	1,25,000	
Rent	Rs. 8,000		Debtors	3,00,000	
Other	6,000		Cash	1,63,000	
		14,000			
		Rs. 10,39,000		Rs. 10,39,000	

Note. Trade creditors represent the purchases of raw materials during August 1976. Debtors represent sales in July and August 1976 at the rate of Rs. 1,50,000 per month.

(*b*) The additional plant, costing Rs. 2,00,000, will be delivered and paid for in September.

(*c*) Raw materials to be consumed per month

September Rs. 70,000 *October to December per month* Rs. 1,00,000

(*d*) Stocks of raw materials are to be increased to Rs. 1,30,000 at the end of September and maintained at that level.

(*e*) Monthly figures of other costs of production :

	September	*October to December per month*
Direct wages	Rs. 16,000	Rs. 24,000

One-quarter each of the above costs would be outstanding at the end of the respective month and would be paid in the following month.

Rent of the factory at Rs. 4,000 per month is paid quarterly in arrears on 30th September and 31st December etc.

Depreciation on plant and machinery is to be provided throughout at the rate of Rs. 7,000 per month.

(*f*) Administration and selling expenses monthly :

	September	*October to December per month*
Salaries	Rs. 20,000	Rs. 22,000
Other office expenses	2,000	3,000

Advertising and publicity will continue at Rs. 10,000 monthly, but will be increased to Rs. 30,000 in October and November. Each of the above expenses is to be considered as paid in the month in which they arise.

(g) Forecast sales are :

September and October	Rs 1,50,000 per month
November	1,60,000
December	2,50,000

(*h*) To meet the higher level of sales planned, work-in-progress and finished stocks are to be increased to Rs. 1,60,000 at the end of October and to Rs. 1,95,000 at the end of November. A fall to Rs 1,75,000 is expected at 31st December.

(*i*) It is expected that existing credit terms will continue to be observed.

(*j*) Th[illegible] monthly such [illegible] overdraft of [illegible] is to be ignored).

As Chief Accountant, you are required to prepare the following for discussion with your managing director :

(*i*) A forecast Trading and Profit and Loss Account for each of the four months September to December 1976, and a supporting forecast Balance Sheet as on 31st December 1976.

(*ii*) A cash forecast, month by month, for the four months to 31st December 1976, showing when any advance on the parent company loan account will be required.

[illegible] *in December*]

SUGGESTED READING

1. *Principles & Practice of Management Accountancy*—Brown & Howard
2. *Cost Accounting*—Weldon
3. *Cost Handbook*—Robert I. Dicky

6

Analysis of Changes in Income

The profit and loss account of a sole trader's or partnership firm's business is normally divided into two sections for showing separately the amount of gross profit and net profit. Even in the case of a joint stock company the figures of gross profit and net profit are calculated separately for internal consumption. Whether or not the accountant calculates gross profit separately, the fact remains that the ultimate net profit is affected by the amount of gross profit. If gross profit in one year goes up, chances are net profit will also go up. Thus this chapter concentrates on the technique adopted for analysing the changes in gross profit rather than net profit.

CAUSES OF CHANGES

The gross profit is the excess of sales over the cost of goods sold. It thus follows that change in the gross profit figure can be attributed to the following factors :

(*a*) Increase or decrease in sales,
(*b*) Increase or decrease in cost of goods sold, or
(*c*) Combination of the above two factors.

Further, an increase or decrease in sales can be due to the following factors :

(*a*) Increase or decrease in sales price,
(*b*) Increase or decrease in quantity of goods sold (value of sale), or
(*c*) Combination of the two.

Similarly the change in cost of goods sold can also be due to :

(*a*) Increase or decrease in the cost of goods sold,
(*b*) Increase or decrease in the quantity of goods sold, or
(*c*) Combination of the above two.

Thus, it can be seen that the gross profit figure is affected by multiple factors. A simple line diagram is helpful in recapitulating the whole discussion so far made :

GROSS PROFIT
(Is affected by)

- **Sales**
  (Sales are affected by)
  - **Quantity Factor**
  - **Price Factor**
  - **Quantity-Price Factor**
- **Cost of goods sold**
  (Cost of goods sold is affected by)
  - **Quantity Factor**
  - **Cost Factor**
  - **Quantity-Cost Factor**

The technique given in this chapter aims at calculating the changes due to quantity factor (in sales as well as in cost of goods sold), price factor, cost factor, quantity-price factor and quantity-cost factor.

THE APPROACH TO THE PROBLEM

The analysis of change in the gross profit implicitly embraces comparison with some other figure. It is possible to know the change only when the present performance is compared with some other performance. There are two ways of measuring the change :

(*a*) By comparing the present performance with the performance of the preceding year ; or

(*b*) By comparing the present performance with the standard performance.

Comparison of present performance with a predetermined standard is better than comparing with past performance. However, such a comparison cannot be made without the sound knowledge of standard costing. Therefore, at this stage our study is limited to analyse the income changes with reference to a preceding period. This chapter thus limits the study to the measurement of change in so far as it relates to the preceding year.

ANALYSIS OF CHANGE IN SALES

As said above, the change in sales is due to (*i*) price, (*ii*) quantity, and (*iii*) combination of price and quantity factors. The procedure has been explained by taking an illustration.

Illustration 1. Consider the following facts :

	1978	*1979*	*Change*
Sales	Rs. 6,00,000	Rs. 7,59,000	Rs. 1,59,000
Units sold	3,000	3,450	450
Unit sale price	200	220	20

Account for the change in sales (Rs.) due to ;

(*a*) quantity (volume),

(*b*) price, and

(*c*) quantity and price taken together.

Solution :

Change due to quantity (volume) .

It is apparent that in 1979, 3,450 units have been sold as against 3,000 units in 1978. Thus increase due to volume is :

= DIFFERENCE IN QUANTITY × BASE YEAR PRICE

$= 450 \times$ Rs. 200

= Rs. 90,000.

Change due to price :

Since sale price has gone up from Rs. 200 to Rs. 220 per unit, the change due to price is Rs. 20 per unit. The impact of change in price is measured by multiplying the difference in price with the base year quantity. The change is :

=DIFFERENCE IN PRICE × BASE YEAR QUANTITY
=Rs. 20 × 3,000
=Rs. 60,000.

		Rs.
The change due to mix :		
The change due to volume		90,000
The change due to price		60,000
Total change accounted for		1,50,000
Total change as per question		1,59,000
Change due to mix (to be accounted for)	Rs.	9,000

The change due to mix can be proved by multiplying the *change in price* with the *change in quantity* :

Rs. 20 × 450	Rs.	9,000

Conclusion :

1. Change due to price =Difference in price × BASE year quantity
2. Change due to quantity=Difference in quantity × BASE year price
3. Change due to quantity=Difference in quantity × Difference in price and price

ANALYSIS OF CHANGE IN COST

The change in cost is again due to (*i*) price, (*ii*) quantity, and *iii*) price and quantity both. The formulae for measuring these changes are similar to that discussed for measuring the change in sales. Thus :

(*i*) CHANGE IN COST DUE TO PRICE = CHANGE IN COST PRICE PER UNIT × BASE YEAR QUANTITY

(*ii*) CHANGE IN COST DUE TO QUANTITY (VOLUME) = CHANGE IN QUANTITY × BASE YEAR PRICE PER UNIT

(*iii*) CHANGE IN COST DUE TO PRICE AND QUANTITY BOTH = CHANGE IN QUANTITY × CHANGE IN PRICE

...stration 2. Assume the following data :

	1978	*1979*	*Change*
Cost of goods sold	Rs. 4,50,000	Rs. 5,43,375	Rs. 93,375
Units sold	3,000	3,450	450
Cost per unit	150	157·50	7·50

Account for the change in cost Rs. 93,375 due to (*i*) quantity, (*ii*) price, and (*iii*) quantity and price both.

Solution :

Change due to price	Rs.	7·50 × 3,000	Rs.	22,500
Change due to quantity		150 × 450		67,500
Change due to quantity and price		7·50 × 450		3,375
Total change (as per the question)			Rs.	93,375

DIAGRAMMATIC APPROACH

The analysis for change in gross profit can also be carried out with the help of a diagram. Under this approach a rectangle is drawn. One side of this rectangle represents price and the other units. Thus the area of the rectangle represents the total price. In order to have the view of a change, first one rectangle representing the base year is drawn and then second rectangle representing the current year is superimposed on it. After this, with the help of areas of *rectangles* (formed due to superimposition of the new rectangle over the old one), the impact of price, quantity and price-quantity factors can be found out.

Illustration 3.

		1978	*1979*	*Change*
Sales	Rs.	6,00,000	7,59,000	1,59,000
Cost of goods sold		4,50,000	5,43,375	93,375
Gross profit	Rs.	1,50,000	2,15,625	65,625
Cost of unit	Rs.	150	157 50	7 50
Sale per unit	Rs.	200	220 00	20 00
Units sold		3,000	3,450	450

Account for change in sale price and cost price with the help of diagrammatic approach.

Solution :

DIAGRAM FOR SALES

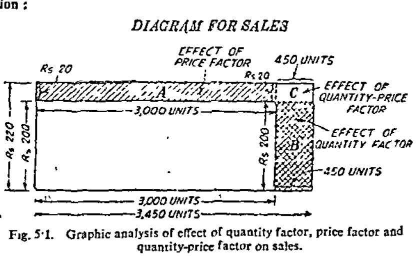


Fig. 5·1. Graphic analysis of effect of quantity factor, price factor and quantity-price factor on sales.

[illegible] The area of recetangle 'A' [illegible] because the area [illegible]

units = Rs. 60,000.

Change in sales due to change in quantity. The area of rectangle discloses the change in sales due to quantity factor because the area of rectangle can be found out by multiplying two sides out of which

=DIFFERENCE IN PRICE × BASE YEAR QUANTITY
=Rs. 20 × 3,000
=Rs. 60,000.

		Rs.
The change due to mix :		
The change due to volume		90,000
The change due to price		60,000
Total change accounted for		1,50,000
Total change as per question		1,59,000
Change due to mix (to be accounted for)	Rs.	9,000

The change due to mix can be proved by multiplying the *change in price* with the *change in quantity* :

Rs. 20 × 450	Rs.	9,000

Conclusion :

1. Change due to price = Difference in price × BASE year quantity
2. Change due to quantity = Difference in quantity × BASE year price
3. Change due to quantity and price = Difference in quantity × Difference in price

ANALYSIS OF CHANGE IN COST

The change in cost is again due to (*i*) price, (*ii*) quantity, and (*iii*) price and quantity both. The formulae for measuring these changes are similar to that discussed for measuring the change in sales. Thus :

(*i*) CHANGE IN COST DUE TO PRICE = CHANGE IN COST PRICE PER UNIT × BASE YEAR QUANTITY

(*ii*) CHANGE IN COST DUE TO QUANTITY (VOLUME) = CHANGE IN QUANTITY × BASE YEAR PRICE PER UNIT

(*iii*) CHANGE IN COST DUE TO PRICE AND QUANTITY BOTH = CHANGE IN QUANTITY × CHANGE IN PRICE

Illustration 2. Assume the following data :

	1978	*1979*	*Change*
Cost of goods sold	Rs. 4,50,000	Rs. 5,43,375	Rs. 93,375
Units sold	3,000	3,450	450
Cost per unit	150	157·50	7·50

Account for the change in cost Rs. 93,375 due to (*i*) quantity, (*ii*) price, and (*iii*) quantity and price both.

Solution :

Change due to price	Rs.	7·50 × 3,000	Rs. 22,500
Change due to quantity		150 × 450	67,500
Change due to quantity and price		7·50 × 450	3,375
Total change (as per the question)			Rs. 93,375

DIAGRAMMATIC APPROACH

The analysis for change in gross profit can also be carried out with the help of a diagram. Under this approach a rectangle is drawn. One side of this rectangle represents price and the other units. Thus the area of the rectangle represents the total price. In order to have the view of a change, first one rectangle representing the base year is drawn and then second rectangle representing the current year is superimposed on it. After this, with the help of areas of *rectangles* (formed due to superimposition of the new rectangle over the old one), the impact of price, quantity and price-quantity factors can be found out.

Illustration 3.

		1978	*1979*	*Change*
Sales	Rs	6,00,000	7,59,000	1,59,000
Cost of goods sold		4,50,000	5,43,375	93,375
Gross profit	Rs.	1,50,000	2,15,625	65,625
Cost of unit	Rs.	150	157·50	7 50
Sale per unit	Rs.	200	220 00	20 00
Units sold		3,000	3,450	450

Account for change in sale price and cost price with the help of diagrammatic approach.

Solution :

DIAGRAM FOR SALES

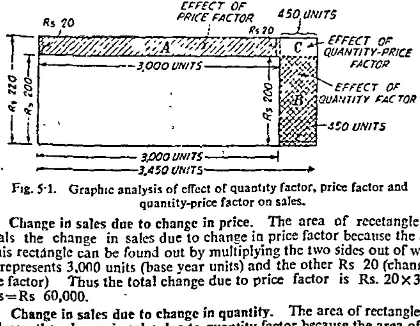


Fig. 5·1. Graphic analysis of effect of quantity factor, price factor and quantity-price factor on sales.

Change in sales due to change in price. The area of recetangle '*A*' reveals the change in sales due to change in price factor because the area of this rectangle can be found out by multiplying the two sides out of which one represents 3,000 units (base year units) and the other Rs 20 (change in price factor). Thus the total change due to price factor is Rs. 20×3,000 units=Rs 60,000.

Change in sales due to change in quantity. The area of rectangle '*B*' discloses the change in sales due to quantity factor because the area of this rectangle can be found out by multiplying two sides out of which one

represents Rs. 200 (base year price) and the other 450 units (change in quantity factor), Thus the total change due to quantity factor is Rs. 200×450 units=Rs. 90,000.

Change in sales due to change in quantity-price factor. The area of rectangle 'C' calculates this change because the area of this rectangle can be found out by multiplying two sides out of which one represents Rs. 20 (the change in price factor) and the other 450 units (the change in quantity factor). Thus the total change due to quantity price factor is Rs. 20×450 units=Rs. 9,000,

Now the change in sales may be accounted for as under :

(*i*)	Change in sales due to price factor	Rs. 60,000
(*ii*)	Change in sales due to quantity factor	90,000
(*iii*)	Change in sales due to quantity-price factor	9,000
	Total change in sales (as per the question)	Rs. 1,59,000

DIAGRAM FOR COST

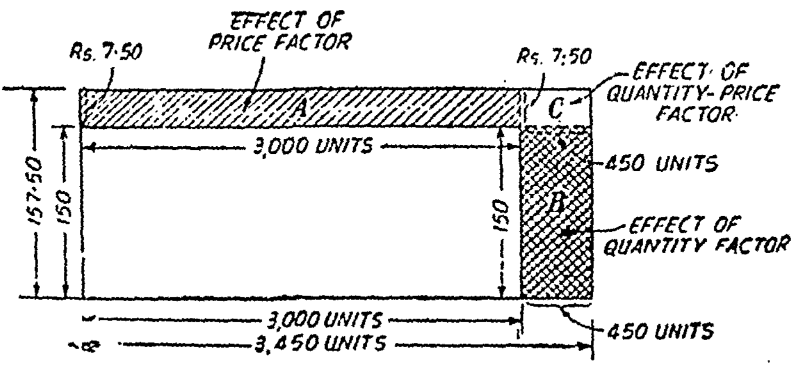


Fig. 5·2—Graphic analysis of effect of quantity factor, cost factor and quantity-cost factor on cost.

Change in cost due to change in cost factor. The area of rectangle '*A*' reveals the change in cost due to change in cost factor because the area of this rectangle can be calculated by multiplying 3,000 units (base year unit) with Rs. 7·50 (change in cost factor). Thus the change in cost due to ost factor is Rs. 7·50×3,000 units=Rs. 22,500.

Cnange in cost due to change in quantity factor. The area of rectangle '*B*' helps us in calculating the impact of change in quantity on the cost. The change due to this factor is the result of multiplication of Rs. 150 (base year cost) and 450 units (change in quantity factor). The total change, therefore, is 450 units×Rs. 150=Rs.67,500.

Change in cost due to change in quantity-cost factor. The area of the third small rectangle '*C*' calculates the change due to quantity-cost factor. One side of this rectangle represents change in cost factor Rs. 7·50 and another side represents change in quantity factor 450 units. The total change thus is 450 units×Rs. 7·50 = Rs. 3,375.

Now total change in cost may be accounted for as under :

(*i*)	Change due to cost factor	Rs. 22,500
(*ii*)	Change due to quantity factor	67,500
(*iii*)	Change due to quantity-cost factor	3,375
	Total change (as disclosed by the question)	Rs. 93,375

STATEMENT FOR ANALYSING CHANGE IN GROSS PROFIT

For analysing the change in gross profit, a statement is prepared where the changes in cost of goods sold and sales due to quantity, price, quantity price, and quantity-cost factors are summarised. For understanding the procedure, data given in the previous illustration is retabulated as under :

STATEMENT ACCOUNTING FOR CHANGE IN GROSS PROFIT

	Favourable change	*Unfavourable change*
Quantity factor in sale	Rs. 90,000	
Quantity factor in cost		67,500
Price factor in sale	60,000	
Price factor in cost		22,500
Quantity-price factor in sale	9,000	
Quantity-cost factor in cost		3,375
Total	1,59,000	93,375
Net favourable change in gross profit		65,625*
	Rs. 1,59,000	1,59,000

*Increase in gross profit can be verified from the question.

USE OF PER CENTS IN ANALYSIS

In the above case it has been seen that for calculating the effect of quantity, price and quantity-price factors on gross profit it was necessary to know :

(*a*) sales,
(*b*) cost of goods sold,
(*c*) unit of goods sold,
(*d*) *cost price per unit*, and
(*e*) sale price per unit.

[illegible]

quantity, sale price, or cost price is given. In case per cent change in any one factor is given, the per cents change in respect of the other two factors are calculated, *i.e.*, if per cent change in quantity is given, per cents change in cost price and sale price are calculated or if per cent change in cost price is gvien, per cents changein quantity and sale price are calculated, or per cent change in sale price is given, per cents change in cost price and quantity are calcuated. After having calculated the per cents change, in th[illegible]

two fackors various causes for the change in gross profit are found out. The procedure has been explained below :

Illustration 4. (*When per cent change in quantity factor is given*)

Assume the following data

		1978	*1979*
Sales	Rs.	14,00,000	17,71,000
Cost of goods sold		10,50,000	12,67,875

The volume increase is 15%.

You are required to calculate :

(*a*) Per cent change in price

(*b*) Per cent change in sale

(*c*) Change in gross profit on various accounts.

Solution :

As the change due to quantity factor is 15% rest of the change in cost price as well as sale price is due to price factor. In order to calculate the per cent change in price factor, first of all, the impact of change due to quantity factor must be eliminated.

Since as per the question the volume increase is 15% in 1979 it means that if there is a sale of 100 artiles in 1978, the sale of articles in 1979 is 115. With the help of this rate, first of all quantity factor will be eliminated from the sale price of 1979 and cost of goods sold in 1979 and then with the help of new figures the change in sale price and cost price will be calculated. This has been depicted as follows :

(*i*) **Elimination of quantity factor from sale price and calculation of per cent change in sale price :**

If the volume after increase is 115, it was 100 before increase.

If the volume after increase is Rs. 17,71,000, it was

$\frac{100}{115} \times$ Rs. 17,71,000, *i.e.,* Rs. 15,40,000 before increase.

Thus the sale in 1979 would have been in any case Rs. 15,40,000 even the change due to quantity factor were zero. But in 1978, actual sale is Rs. 14,00,000. Thus now increase in the sale of 1979 over 1978 (*i.e.,* Rs. 1,40,000) is only due to price factor, Hence the per cent change in sale due to price faetor is :

$$\frac{\text{INCREASE IN SALE PRICE DUE TO CHANGE IN PRICE}}{\text{SALE PRICE IN THE BASE YEAR}} \times 100$$

$$= \frac{1,40,000}{14,00,000} \times 100$$

= 10% increase in price over 1978 price.

(*ii*) **Elimination of quantity factor from cost price and calculation of per cent change in cost price :**

Cost price in 1979 is affected by the quantity factor and price factor. First of all, quantity factor will be eliminated. It is as under :

$$= \frac{100}{115} \times \text{COST OF GOODS SOLD IN 1979}$$

$$= \frac{100}{115} \times 12{,}67{,}875$$
$$= \text{Rs. } 11{,}02{,}500.$$

The increase in cost price is as under :

Cost price in 1979 before quantity factor	Rs.	11,02,500
Cost price in 1978 before quantity factor		10,50,000
Increase in cost price in 1979 over 1978	Rs.	52,500

Per cent change in cost price, therefore, is :

$$= \frac{\text{CHANGE IN COST PRICE DUE TO CHANGE IN PRICE}}{\text{COST PRICE IN THE BASE YEAR}} \times 100$$
$$= \frac{52{,}500}{10{,}50{,}000} \times 100$$

$=5\%$ increase in cost price in 1979 over 1978,

STATEMENT ACCOUNTING FOR CHANGE IN SALES, COST OF GOODS SOLD AND GROSS PROFIT

For the years ended December 31, 1978 and 1979

Amounts	*Sale*	*Cost of goods sold*	*Gross profit*
1979	Rs. 17,71,000	12,67,875	5,03,125
1978	14,00,000	10,50,000	3,50,000
Increase	Rs. 3,71,000	2,17,875	1,53,125
Increase (decrease) due to :			
Quantity factor—Amounts by which increased volume would have affected sales, price factor remaining the same : 15% of Rs. 14,00,000	2,10,000		2,10,000[1]
Quantity factor—Amounts by which increased volume would have affected cost, cost factor remaining the same : 15% of Rs 10,50,000		1,57,500	(1,57,500)[2]
Price factor—Amounts by which change in unit price would have affected sales, quantity factor remaining the same : 10% of Rs 14,00,000	1,40,000		1,40,00[illegible]
Cost factor—Amounts by which change in cost price would have affected cost, quantity factor remaining the same : 5% of Rs 10,50,000		52,[illegible]	[illegible]

Quantity-price factor—Amounts by which change in quantity-price factor would have affected sales : 15% (quantity increase) × 10% (price increase) of Rs. 14,00,000	21,000		21,000[1]
Quantity-cost factor—Amounts by which change in quantity cost factor would have affected cost : 15% (quantity increase) × 5% (cost increase) of Rs. 10,50,000		7,875	(7,875)[2]
Total	Rs. 3,71,000	2,17,875	1,53,125

Tutorial Notes 1. Increase in sale price increases the gross profit. 2. Increases in cost price decreases the gross profit. The amounts reducing the gross profit have been shown in parenthesis.

Illustration 5. (*When change in price factor is given*)

Assume the following data :

X Ltd

CONDENSED COMPARATIVE STATEMENT OF SALES, COST OF SALES AND GROSS PROFIT

	Year ended December 31	
	1978	*1979*
Net sales	Rs. 15,00,000	14,17,500
Cost of goods sold	10,50,000	10,58,400
Gross profit	Rs. 4,50,000	3,59,100

You learn that during the year 1979 the selling price decreased by 10% Account for the change due to quantity factor, cost factor, quantity-cots factor, and quantity price factor and also prepare a condensed statement accounting for the change in gross profit.

Solution :

First of all, percentage change in the remaining factors, namely, the cost and volume factors will be calculated, and then a condensed statement accounting for the change in gross profit will be prepared.

Step 1. Elimination of price factor from sales :

The sales in 1979 before the decrease in sales price would have been :

$$= \frac{100}{90} \times \text{Rs. } 14{,}17{,}500$$

$$= \text{Rs. } 15{,}75{,}000.$$

There would have been sales of Rs. 15,75,000 in 1979 had there been no change in price factor.

Step 2. Calculation of quantity factor in sales :

Sale in 1979	R. 15,75,000
Sale in 1978	15,00,000
Increase in sale	Rs. 75,000

If the price had remained the same in 1979 the sales would have shown an increase of Rs. 75,000.

Thus the per cent increase is :

$$=\frac{75{,}000}{15{,}00{,}000}\times 100$$

$$=5\% \text{ (increase in quantity factor)}$$

Step 3. Elimination of quantity factor from the cost :

Since the quantity of sale has increased by 5%, cost of goods sold is also affected to this extent. If there had been no change in quantity factor, the cost of goods sold in 1979 would have been :

$$=\frac{100}{105}\times \text{Rs. } 10{,}58{,}400$$

$$=\text{Rs. } 10{,}08{,}000.$$

Step 4. Calculation of cost factor in cost of goods sold :

Cost of goods sold in 1979 (if there had been no change in quantity)	Rs. 10,08,000
Cost of goods sold in 1978 (for the same quantity)	10,50,000
Decrease in cost	Rs. 42,000

Thus, the per cent decrease is :

$$\frac{42{,}000}{10{,}50{,}000}\times 100=4\%$$

Now we have the information as under :

(*i*) Decrease in price factor 10% (given)

(*ii*) Increase in quantity factor 5% (calculated).

(*iii*) Decrease in cost factor 4% (calculated)

With the help of this information a statement accounting for change in gross profit will be prepared.

X Ltd

STATEMENT ACCOUNTING FOR CHANGE IN SALES, COST OF GOODS SOLD AND GROSS PROFIT

For the years ended December 31, 1978 and 1979

Amounts	*Sales*	*Cost of goods sold*	*Gross profit*
1979	Rs. 14,17,500	10,58,400	3,59,100
1978	15,00,000	10,50,000	4,50,000
	Rs. (82,500)*	8,400	(90,900)

Increase (decrease) due to :			
Quantity factor –Amounts by which increased volume would have affected sale, price factor remaining the same : 5% of Rs. 15,00,000	75,000		75,000
Quantity factor—Amounts by which increased volume would have affected cost, price factor remaining the same : 5% of Rs. 10,50,000		52,500	(52,500)
Price factor—Amounts by which change in unit price would have affected sales, quantity factor remaining the same : 10% of Rs. 15,00,000	(1,50,000)		(1,50,000)
Cost factor—Amounts by which change in unit cost price would have affected sales, quantity factor remaining the same : 4% of Rs. 15,00,000		(42,000)	42.000
Quantity-price factor—Amounts by which change in quantity-price factor would have affected sales : 5% (quantity increase) × 10% (price decrease) of Rs. 15,00,000	(7,500)		(7,500)
Quantity-cost factor—Amounts by which change in quantity-cost factor would have affected cost : 5% (quantity increase) × 4% (cost decrease) of Rs. 10,50,000		(2,100)	2,100
Totals	Rs. (82,500)	8,400	(90,900)

Tutorial Notes

Decrease in the figure has been shown in parenthesis. As decrease in sales will decrease gross profit also, the figure shown in parenthesis in sales column has been shown in parenthesis in gross profit column also. But decrease in cost price will increase the gross profit, therefore, the figure shown in parenthesis in cost of goods sold column has not been shown in parenthesis in gross profit column. Similarly, the figure not shown in parenthesis in cost of goods sold column (because of increase in the cost) has been shown in parenthesis in gross profit column (because increase in cost reduces the profit).

Alternative Method :

There is an alternative method of analysing the variations in gross profit. Under this method the six factors which have been shown earlier are grouped into three as shown below :

Price factor (sales) Quantity-price factor (sales)	Change due to price.
Quantity factor (sales) Quantity factor (cost)	Change due to volume.
Cost factor Quantity-cost factor	Change due to efficiency.

This approach seems to be simpler than the earlier one and illustrated below.

	Rs.	Rs.
(*a*) Sales in 1979 had there been no decrease in price factor $14{,}17{,}500 \times \frac{100}{90}$ = Rs. 15,75,000.		
The decrease in G. P. due to drop in price :		
1979 sales	14,17,500	
Less : Sales equivalent at 1978 price	15,75,000	
		(1,57,500
(*b*) Having eliminated the price factor, now comparison of sales is made at old prices.		
1979 sales in terms of 1978 prices	15,75,000	
Less : 1978 sales	15,00,000	
Increase in sales due to increased quantity	75,000	
Gross profit at 30% thereon		22,50
(*c*) Now a comparison will be made between the costs of 1978 and 1979 having regard to increased volume and assuming that there is no increase in costs		
1978 cost of goods sold	Rs. 10,50,000	
1979 cost Rs. 10,50,000+5%	11,02,500	
Less : Actual cost	10,58,400	
		44,10
		Rs. (90,900

Verification :

(1) Decrease due to price = The sum of changes due to pri factor and quantity price factor.

(Rs. 1,57,500=(Rs. 1,50,000+Rs. 7,500)

(2) Increase due to volume = The sum of changes due to quanti factors (sales and cost).

(Rs. 22,500) = Rs. 75,000+(Rs. 52,500)

(3) Increase due to efficiency = The sum of changes due to co factor and quantity cost factor.

Rs. 44,100=Rs. 42,000+Rs. 2,100.

Illustratration 6. (*When change in cost factor is given*)

Assume the following data :

	1978	*1979*
Net sales	Rs. 5,25,000	5,43,375
Cost of goods sold	3,85,000	3,74,220
Gross profit	Rs. 1,40,000	1,69,155

You learn that during 1979 cost increased by 8%. You are required to calculate :

(*a*) per cent change in volume factor, and

(*b*) per cent change in price factor.

You are also required to prepare a condensed statement accounting for change in gross profit due to quantity factor, price factor, cost factor, quantity-price factor, and quantity-cost factor.

Solution :

Since in *this illustration per cent of cost change is given, the starting* point is the cost factor. From the cost of 1979 as per the per cent change, the cost factor will be deleted, then quantity change will be calculated. With the quantity change, quantity factor in sales of 1979 will be deleted and then price factor will be calculated. This has been shown below :

Step 1 Elimination of cost factor from the 1979 cost of goods sold :

As cost price has shown an increase of 8%, the price in 1979 must be 108, if the price in 1978 were 100. With this information in hand, the cost of goods sold in 1979, if there had been no increase in cost factor, can be calculated as under :

$$= \frac{100}{108} \times \text{Rs. } 3{,}74{,}220$$
$$= \text{Rs. } 3{,}46{,}500.$$

Step 2. Calculation of quantity factor :

In Step 1 it was seen that if there had been no increase in cost price, the cost of goods sold in 1979 would have been Rs. 3,46,500. This cost of goods sold, if compared with that in 1978 will reveal the change due to quantity factor.

Cost of goods sold in 1978	Rs. 3,85,000
Cost of goods sold in 1979	3,46,500
Reduction in cost of goods sold	Rs. 38,500

Hence,

$$\text{QUANTITY FACTOR} = \frac{\text{REDUCTION IN COST}}{\text{COST IN BASE YEAR}} \times 100$$
$$= \frac{38{,}500}{3{,}85{,}000} \times 100$$
$$= 10\% \text{ (decrease in quantity factor)}$$

Step 3. Elimination of quantity factor from selling price :

Selling price in 1979 is Rs. 5,43,375. This sale in 1979 is after the reduction in the quantity by 10%. If there had been no reduction, the sale in 1979 would have been :

$$\text{SALE IN 1979 AFTER THE ELIMINATION OF QUANTITY FACTOR} = \frac{100}{90} \times \text{Sale of 1979}$$

$$=\frac{100}{90}\times \text{Rs. } 5,43,375$$

$$=\text{Rs. } 6,03,750.$$

Step 4. Calculation of price factor :

In Step 3 above it was seen that sales in 1979, if there had been no reduction in quantity, would have been Rs. 6,03,750. Thus any difference in the sale figures of 1978 and 1979 is now only due to price factor.

Sales in 1979	Rs. 6,03,750
Sales in 1978	5,25,000
Increase in sales due to price	Rs. 78,750

Hence,

$$\text{PRICE FACTOR}=\frac{\text{INCREASE IN SALES}}{\text{SALES OF THE BASE YEAR}}\times 100$$

$$=\frac{78,750}{5,25,000}\times 100$$

$$=15\%$$

Now the information is as under :

(*a*) Increase in cost factor 8% (given).

(*b*) Decrease in quantity factor 10% (calculated).

(*c*) Increase in price factor 15% (calculated).

With the help of above information a statement accounting for change in gross profit will be prepared.

STATEMENT ACCOUNTING FOR CHANGE IN SALES, COST OF GOODS SOLD AND GROSS PROFIT

For the years ended December 31, 1978 and 1979

	Sales	*Cost of goods sold*	*Gross Profit*
1979	Rs. 5,43,375	3,74,220	1,69,155
1978	5,25,000	3,85,000	1,40,000
	Rs. 18,375	(10,780)	29,155
Increase (decrease) due to :			
Quantity factor—Amounts by which decreased volume would have affected sales, price factor remaining the same : 10% of Rs. 5,25,000	(52,500)		(52,500)
Quantity factor—Amounts by which decreased volume would have affected cost of sale, price factor remaining the same : 10% of Rs. 3,85,000		(38,500)	38,500
Price factor—Amounts by which change in unit price would have affected sales, quantity factor remaining the same : 15% of Rs. 5,25,000	78,750		78,750

Cost factor Amounts by which change in cost factor would have affected cost of sale, quantity factor remaining the same : 8% of Rs. 3,85,000		30,800	(30,800)
Quantity-price factor—Amounts by which change in quantity price factor would have affected sale : 10% (quantity decrease) × 15% (price increase) of Rs. 5,25,000	(7,875)		(7,875)
Quantity-cost factor—Amounts by which change in quantity cost factor would have affected cost of sale : 10% (quantity decrease) × 8% (cost increase) of Rs. 3,85,000		(3,080)	3,080
Total	Rs. 18,375	(10,780)	29,155

Tutorial Notes 1. Figures increasing sale will increase gross profit also. These figures have not been put in parenthesis in both the sales and gross profit columns.

2. Figures reducing sales will reduce gross profit. These figures have been put in parenthesis in both the sales and gross profit columns.

3. Figures reducing cost will increase gross profit. These figures have been put in parenthesis in cost of goods sold column but without parenthesis in gross profit column.

4. Figures increasing cost will reduce gross profit. These figures have been put in parenthesis in cost of goods sold column but shown in parenthesis in gross profit column.

Alternate Method :

	Rs.	Rs.
(a) Sales in 1979 had there been no increase in the price factor.		
$5{,}43{,}375 \times \frac{100}{115} = \text{Rs. } 4{,}72{,}500$		
The increase in G.P. due to increase in price		
1979 sales	5,43,375	
Less : Sales equivalent at 1978 price	4,72,500	
		70,875
(b) Having eliminated the price factor now comparison of sales is made at old price		
1979 sales in terms of 1978 price	4,72,500	
Less : 1978 sales	5,25,000	
Decrease in sales due to decreased quantity	52,500	
Gross profit at $26\frac{2}{3}\%$ thereon		(14,000)
(c) Now a comparison will be made between the costs of 1978 and 1979 having regard to increased volume and assuming that there is no increase in costs.		
1978 cost of goods sold	3,85,000	
1979 cost Rs. 3,85,000 (—) 10%	3,46,500	
Less : Actual cost	3,74,220	
		(27,720)
Total		Rs. 29,155

In the illustrations given above the variation in cost factor is given in a summary fashion. But in some cases the more details are given about the variation in cost in which case the analysis of changes in income will be more detailed than hitherto dealt with.

Illustration 7. The summarised results of operations of *A* Ltd are given below :

	For the year ended 31st December *1974*	*1975*
	(Rs. in lakhs)	
Sales	120	129·6
Material cost of sales	80	91·1
Variable overheads	20	24·0
Fixed expenses	15	18·5

During 1975 average prices increased over the previous year by :
20% in the case of sales
15% in the case of materials
10% in overheads
Prepare a profit variation statement. [C.A. (Final) Nov. 1976]

Solution

		Rs. (in lakhs)
(1) Sales in 1975 had there been no increase in the price factor		
Rs. $\frac{129\cdot6\times100}{120}$ = Rs 108 lakhs		
The increase in G.P. due to increase in price		
1975 sales	Rs. 129·6	
Less : Sales equivalent at 1974 prices	108·0	21·6
(2) 1975 sales in terms of 1974 prices	108 lakhs	
Less : 1974 sales	120 lakhs	
	12 lakhs	
G.P. at 1/6 thereon		(2·0)
(3) 1974 material cost of sales	80 lakhs	
1975 cost 80 lakhs less 10%	72 lakhs	
Actual material cost of sales of 1975	91·1 lakhs	(19·1)
(4) Variable overheads (1974)	20 lakhs	
Variable overheads of (1975) = 20 lakhs less 10%	18 lakhs	
Actual overheads of 1975	24 lakhs	(6·0)

(5)	Fixed overheads of 1974	15·0 lakhs	
	Fixed overheads of 1975 should also be	15·0 lakhs	
	Actual fixed overheads of 1975	18·5 lakhs	(3·5)
			(9·0)

Profit of 1974	5·0 lakhs
Loss of 1975	(4·0) lakhs
Change in income	9·0 lakhs

The change in costs can be further analysed as under:

(1) Material costs

		Rs.
Material costs at 1974 prices $\frac{91{\cdot}1 \times 100}{115}$	79·2	
Material costs permitted at 1974 prices	72·0	
Usage variance		7·2
Price variance (Total variance—usage variance)=(Rs. 19·1—Rs. 7·2)		11·9

Price variance can also be calculated as given below:

Material costs at 1974 prices	Rs. 79·2 lakhs
Material costs at 1975 prices	Rs. 91·1 lakhs
Price variance	Rs. 11·9 lakhs

(2) Variable overheads

Permissible amount for 1975	Rs. 18·00 lakhs
Variable overheads of 1975 at 1974 prices $\frac{24 \times 100}{110}$	Rs. 21·82 lakhs
Expenditure variance	3·82 lakhs

Variable overheads at 1974 prices	21·82 lakhs
Variable overheads at 1975 prices	24·00 lakhs
Price variance	2·18 lakhs

(3) Fixed overheads

Fixed overheads of 1975 at 1974 prices $\frac{18{\cdot}5 \times 100}{110}$	16·82 lakhs
Permissible amount	15·00 lakhs

Expenditure variance	1·82 lakhs
Amount spent in 1975	18·50 lakhs
Amount spent at 1974 prices	16·82 lakhs
Price variance	1·68 lakhs

In all the examples given above variation in income is analysed historical basis. It is also possible to estimate the income of the future the basis of changes in costs, selling prices and quantities anticipated.

Illustration 8. The revenue account of Goodwill Company Ltd has b summarised as shown below :

	Rs.	Rs
Sales		60,00,
Direct materials	18,00,000	
Direct wages	12,00,000	
Variable overheads	4,80,000	
Fixed overheads	17,20,000	
		52,00,
Profit		8,00,

The licensed capacity of the company is Rs 80,00,000 but the factor is sales demand. It is proposed by the management that in or to utilise the existing capacity, the selling price of the product should reduced by 5%.

You are required to prepare a forecast statement showing the ef of the proposed reduction in selling price after taking into account following changes in costs :

Sales forecast Rs 76,00,000 (at reduced prices).

Direct wage rates and variable overheads are expected to increase 5%.

Direct material prices are expected to increase by 2%.

Fixed overheads will increase by Rs. 80,000.

[C A (Final) May 19

Solution.

Goodwill Company Limited

Statement showing the effect of changes in prices and costs income.

		Rs
Sales		76,00,000
Direct material	24,48,000	
Direct wages	16,80,000	
Variable overheads	6,72,000	
Fixed overheads	18,00,000	
		66,00,000
Net profit estimated		10,00,00

utorial Notes

	Rs.	
) Sales at present level	60,00,000	(3/4 capacity)
Add Sales to work to licensed capacity (work out 1/3rd increase of present volume)	20,00,000	(1/4 capacity)
	80,00,000	(Full licensed capacity)
Less 5% drop in prices	4,00,000	
Sales forecast	76,00,000	—do

	Rs.
) Material costs	
Previous year	18,00,000
Rise due to increase in volume (1/3)	6,00,000
	24,00,000
Add 2% due to price increase	48,000
	24,48,000

	Rs.
Wages	
Previous year	12,00,000
Rise due to increase in volume (1/3)	4,00,000
	16,00,000
Add 5% due to increase in rates	80,000
	16,80,000

	Rs.
Variable overheads	
Previous year	4,80,000
Rise due to increase in volume (1/3)	1,60,000
	6,40,000
Add 5% increase in rates	32,000
	6,72,000
Fixed overheads (Rs. 17,20,000+Rs. 80,000)	18,00,000

ASSIGNMENT MATERIAL

jective type questions :

I. State whether the following statements are 'true' or 'false' :

(*a*) Gross profit is the difference between sales and purchases.

(*b*) In analysing changes in income comparison of present perfor-nce with a predetermined standard is better than comparing with past formance.

(*c*) Analysis of changes in income is possible only when the per-ttage change in quantity sold, sale price and cost price of the goods are en.

(*d*) Change in income due to cost factor and quantity-cost factor also be stated as changes in income due to efficiency.

(e) The change in income attributable to material costs can be further analysed into price variance and expenditure variance.

(f) The changes in income attributable to labour costs can be further analysed into rate variance and efficiency variance.

II. **Fill in the blanks :**

(a) The change in gross profit can be attributed to increase or decrease in sale and to... ... ...or to a combination of both.

(b) In analysing the changes in income it is convenient to group the changes under price volume and... ... ...factors.

(c) The change in income due to quantity factors (both sales and cost) can be grouped as changes due to... ... .

(d) The variation in income due to variable overheads can be analysed into price variance and... ... .

(e) The change in the sales due to quantity is measured by the formula

Change in quantity × ?

(f) The change in the cost due to price and quantity factors is measured by the formnla

Differene in quantity × ?

(g) Volume variance is the... ... ...on the change in sales after adjusting for price factor.

III. **Indicate the correct answer :**

(a) The increase in the sales of the current year may be due to
- (i) increase in sales prices
- (ii) increase in sales quantity
- (iii) Combination of the two.

(b) Increase in the G.P. of the current year may be due to
- (i) increase in turnover
- (ii) reduction in cost of goods sold
- (iii) Combination of the two.

(c) During period I material costs were Rs 4.800. These increased to Rs. 7,500 during period II. There was an increase in the material prices by 20% and quantity sold by 12·5%. The increase in material costs due to price was
- (i) Rs. 2,700
- (ii) Rs. 1,250
- (iii) Rs. 850.

(d) On the basis of the facts given in (c) the increase in material cost due to adverse usage variance is
- (i) Rs. 2,700
- (ii) Rs. 1,250
- (iii) Rs. 850.

(e) Sales during period I and period II were Rs. 8,000 and 9,900 respectively. The sale prices increased by 10% during period II. increase in G.P. due to change in prices is

(i) Rs. 1,900
(ii) Rs. 800
(iii) Rs. 900.

(f) On the basis of the same facts if the gross profit margin during eriod I was 25% then increase in G.P. due to volume is

(i) Rs. 250
(ii) Rs. 475
(iii) Rs. 225.

Questions

1. In what groups can you classify the causes of a change in the gross profit from one period to another ?

2. What are the reasons of a change in the sales ?

3. Enumerate the causes of a change in the cost of goods sold.

4. Discuss briefly the method of classifying the change in cost price due to : (a) quantity, (b) price, and (c) mix.

5. (a) Is it possible to calculate the rate of change in (i) volume, and (ii) cost price when the rate of change in sale price is given ?

If yes, explain it with the help of an illustration.

(b) Is it possible to calculate the remaining two rates when one o the following is given : (i) Rate of change in volume, (ii) Rate of chan in cost price, (iii) Rate of change in sale price ?

6. What may be the possible reasons for an increase in the size gross profit of the current year as compared to that of previous year ?

[B. Com. (Hons.), Delhi 1

Problems

1. Condensed comparative statement of gross profit on sal Mehra Ltd. :

	1978	
Sales	Rs. 2,00,000	Rs. 2,
Cost of goods sold	1,40,000	1,
Gross profit	Rs. 60,000	
Units sold	1,00,000	
Unit selling price	Rs. 2·00	Rs.
Unit cost price	1·40	

t for the changes in sales, cost of goods sold and gro

2. Condensed comparative statement of Narain Bros :

	1978	1979
Sales	Rs. 2,18,750	Rs. 2,40,000
Cost of goods sold	1,43,500	1,60,000
Gross profit	Rs. 75,250	Rs. 80,000
Units sold	35,000	40,000

Account for the changes in sales, cost of goods sold, and gross profit.

3. Condensed statement relating to gross profit of Blue Bottom Traders :

	1978	1979
Sales	Rs. 4,00,000	Rs. 4,50,000
Cost of goods sold	2,80,000	3,25,000
Gross profit	Rs. 1,20,000	Rs. 1,25,000
Units inventory :		
In the beginning	60,000	70,000
Purchases	2,10,000	2,60,000
In the end	70,000	80,000

Account for the changes in sales, cost of goods sold, and gross profit.

4. Assume the following data :

	1978	1979
Sales	Rs. 7,50,000	Rs. 8,91,000
Cost of goods sold	4,50,000	5,15,160
Gross profit	Rs. 3,00,000	Rs. 3,75,840

If selling price increased by 10% in 1979, what were the per cents of change in : (*a*) Volume, and (*b*) Costs ?

5. Assume the following data .

	1978	1979
Sales	Rs. 5,00,000	Rs. 4,72,500
Cost of goods sold	3,50,000	3,52,800
Gross profit	Rs 1,50,000	Rs. 1,19,700

If cost decreased by 4%, what were the per cents of change in : (*a*) volume, and (*b*) selling price ?

(*Selling price decrease 10% ; Volume increase 5%*)

6. Assume the following data :

	1978	1979
Net sales	Rs. 12,50,000	Rs. 11,81,250
Cost of goods sold	8,75,000	8,52,000
Gross profit	Rs. 3,75,000	3,29,250

If volume increased by 5%, what were the per cents of change in : (*a*) cost price, and (*b*) sale price ?

(*Cost price decreased by 4% : Sale price decreased by 10%*)

7. Assume the following data :

	1978	*1979*
Net sales	Rs. 6,25,000	Rs. 5,90,625
Cost of goods sold	4,37,500	4,41,000
Gross profit	Rs. 1,87,500	Rs. 1,49,625

If sale price decreased by 10%, what were the per cents of change in : (*a*) volume, and (*b*) cost price ?

(*Volume increased by 5% ; Cost price decreased by 4%*)

8. The data from Top Trees Ltd are as under :

	1978	*1979*
Sales	Rs. 1,50,000	Rs. 1,55,250
Cost of goods sold	1,10,000	1,06,920
Gross profit	Rs. 40,000	Rs. 48,330

If cost price increased by 8%, what were the per cents of change in : (*a*) volume, and (*b*) selling price ?

Also account for per cents of change in sales, cost and volume.

(*Volume decreased by 10% ; Selling price increased by 15%*)

9. Assume the following data :

	1978	*1979*
Sales	Rs. 2,25,000	Rs. 2,32,875
Cost of goods sold	1,65,000	1,60,380
Gross profit	Rs. 60,000	Rs. 72,495

If volume decreased by 10%, what were the per cents of change in : (*a*) cost price and (*b*) selling price ?

(*Selling price increased by 15% : Cost price increased by 8%*)

10. The comparative figures for two periods are given below :

	Period I		*Period II*	
	Rs.	Rs.	Rs.	Rs.
Sales		8,00,000		9,90,000
Costs :				
Materials	4,80,000		7,50,000	
Labour	1,20,000		1,50,000	
Variable overheads	24,000		30,000	
Fixed overheads	86,000		1,00,000	
		7,10,000		10,30,000
Net income		Rs. 90,000		(40,000)

During period II material prices rose by 20%, labour rates by 12·5% and expenses both variable and fixed by 5%. As a consequence selling prices were increased by 10% and there was also increased sale as a result of sales campaign.

Analyse the variation in income :

	Rs.
Variation due to Sale price	90,000
due to Sale volume	22,000
due to Material usage	(85,000)
due to Material price	(1,25,000)
due to Labour efficiency	1,667
due to Labour rate	(16,667)
due to Variable overhead expenditure	(1,570)
due to Variable overhead prices	(1,430)
due to Fixed overhead expenditure	(9,238)
due to Fixed overhead prices	(4,762)
Total	Rs. 1,30,000

11. The following are the trading results of Mandakini Limited for the year ending 30th June, 1980 :

	Rs.	Rs.
Sales (1,00,000 units)		4,00,000
Costs :		
Material	50,000	
Wages : Direct	82,000	
Indirect, fixed	19,000	
Production expenses :		
Variable	25,000	
Fixed	30,000	
Administration expenses :		
Fixed	24,000	
Selling expenses :		
Variable	20,000	
Fixed	22,000	
Distribution expenses :		
Variable	18,000	
Fixed	10,000	3,00,000
Profit	Rs.	1,00,000

Forecasts for the year ending 30th June, 1981 are given below :

(1) A sales price reduction to Rs. 2 per unit will increase sales volume by 50%.

(2) Material prices will remain unchanged except that because of increased quantities purchased, a 5% quantity discount will be obtained.

(3) Direct wage rates will increase by 10%,

(4) Variable selling costs will increase proportionately with sales value.

(5) Inflation will increase variable production and distribution expenses by 10%.

(6) All fixed costs will increase by 20%.

(7) There will be no stocks or work-in-progress at the beginning or end of the year.

Using the above information you are required to :

(*a*) Prepare a statement showing the profit forecast for the year ending 30th June, 1981.

(*b*) Prepare an alternative profit statement for the year ending 30th June, 1981 based on a sales price increase of 10% on 1979–80 price and a sales volume of 1,00,000 units. **(Adopted from I.C.M.A., London)**

[(*a*) *Rs. 24,000* : (*b*) *Rs. 1,04,500*]

12. The profits for 1977 and 1978 together with certain relevant information are given below :

	1977	1978
	Rs.	Rs.
Materials consumed	2,00,000	2,80,000
Wages	1,60,000	2,40,000
Overheads—fixed	60,000	64,000
Overheads—variable	48,000	68,000
Net Profit	20,000	41,000

In 1978, wage rate was increased by 20%, materials prices by 10% and sales price by 10%.

Analyse the causes of increase in profit in 1978

(C.A. Final November 1979)

[Increase due to selling price Rs. 63,000)
Increase on account of sales volume Rs. 23,280
Increase due to saving in materials used Rs. 3,654
Increase due to saving in wage cost Rs. 6,550
Decrease due to increase in material prices (Rs. 25,454)
Decrease due to increase in wage rate (Rs. 40,000)
Decrease due to increase in overheads (Rs. 6,040)
Decrease due to increase in variable overheads (Rs. 4,000)]

SUGGESTED READING

1. *Accountancy*—William Pickles
2. *Cost Accounting*—Cashin & Polimeni

7

Variance Accounting

One of the important functions of management is control. Through control management ensures that events take place according to the plan of action. Naturally, without control planning becomes a futile effort. Control is [illegible]

(*a*) Setting up of standards for control.

(*b*) Measuring actual performance.

(*c*) Analysing the variances by comparing the actuals with standards.

It is this last step which enables the management to institute corrective action and ensures effective control by analysing the variance in terms of :

(*a*) Where the variance has taken place, *i.e.*, management must know the responsibility centres/departments in which variances have occurred.

(*b*) What factors contributed to the variance ? Was the variance due to efficiency factor or price factor ?

(*c*) Who is responsible for the variance ? This is easy to determine once the factor responsible for the variance is identified.

(*d*) How far the variance has affected the planned profit ?

Management by Exception. Variance accounting is essentially an 'attention-directing' technique. Managers are busy people and are also highly paid. If their services are to be fruitfully utilised, they must concern themselves only with those aspects of company's operations which are off the standard. This enables them to analyse the problems and take corrective action either through changes in the business plan or through effective supervision. By keeping the management informed about the erratic and out-of-line behaviour of business, accountants facilitate control of the business through what is popularly known as 'management by exception'. Management by exception saves the managers a lot of time since they need not pay their attention to activities or aspects of operations which go on smoothly according to plan.

Controllable and Uncontrollable Variances. Control can be effective only when action is taken by the appropriate authority against those responsible for the activity. Therefore this technique of variance accounting must be designed having regard to the responsibilities and authority of the individual managers. Information must be furnished to the individual manager with respect to factors for which he is responsible and there is no use of furnishing information for which he has no concern. For example, an adverse variance in material cost may be partly due to high wastage of material and partly due to bad purchase. The foremen and the production manager are the persons to whom information should be given regarding the former. There is no use of reporting to these people the amount of variance arising due to material price. It is only the purchase manager who is concerned with the adverse material price variance. When variances are related to the responsibilities of the concerned managers, they are termed as controllable. Variances which are beyond the control of management, *i.e.*, those arising due to extraneous causes, are termed as uncontrollable. Examples of uncontrollable variances are increase in wage rate, increases in costs of inputs due to general rise in prices, etc.

In general variances relating to material, labour and variable overheads can be classified as price and efficiency variances. Price variances arise due to payment of higher or lower price for the inputs than the standard price set for them. Efficiency variances arise because of the variation in the use of real quantities of resources such as labour hours and quantities of materials from the standard quantities set for accomplishing the task. In many cases price variances may be beyond the control of the management and are examples of uncontrollable variances. It is only with respect to 'efficiency variances' that the management can exercise relatively more control and therefore these variances should receive greater attention. The scope for cost reduction lies only in instituting corrective action with respect to variances which are amenable to control.

FAVOURABLE AND UNFAVOURABLE VARIANCES

When actual cost is less than the standard cost it is said to be a *favourable* variance. A favourable variance is *normally* an index of efficiency. When, on the other hand, actual cost is more than the standard cost, the variance is said to be unfavourable and is *normally* an index of inefficiency.

A favourable variance is also called a "credit" variance and unfavourable variance a "debit" variance. These alternative names of variances have been derived from the financial accounting where Variance Account is treated as a nominal account and keeping with the rule of nominal account, Variance Account is debited when variance is unfavourable (debit all losses) and is credited when variance is favourable (credit all gains).

While using these variances sufficient care and precautions should be taken because a favourable variance need not always be really favourable. It may be the result of many other variances which are unfavourable. As, for example, a favourable material usage variance may,

of course, be advantageous to the company, but when related to unfavourable labour efficiency variance, it may be disclosed that material has been conserved by the more careful operation and slower output rate. Similarly, taken by itself, a favourable labour rate variance seems to be advantageous to the company but when intelligently connected with the unfavourable labour efficiency variance, it may be disclosed that it was due to employment of lower grade workers at cheaper rates which has lowered the efficiency but made labour rate variance favourable.

These variances must not be read in isolation. They should be related with other variances and the net effect of all the variances must be reported to the management for efficient planning and correct conclusions.

The setting up of Cost Standards. Before we proceed to discuss the structure of variances, it should be stated at the outset that the utility of variance accounting very much depends on the establishment of proper cost standards. The determination of cost standards depends on the correct ascertainment of economic data such as material quantities, material prices, labour hours, wage rates, yield losses, selling quantities, selling prices, etc. If this data are not properly determined, the standards which are crucial for the purpose of control are vitiated. Therefore, management's primary duty in relation to control is to see that the standards with reference to which variances are calculated are reasonable and accurate. There is also need to continuously revise them in the light of changed circumstances from time to time.

Structure of Variances. The essence of all control lies in achieving the profit that the managers have set out to achieve. Once the management decides to have profit control, it ensures a comprehensive analysis of all operations relating to production, finance, purchase and marketing. Therefore, the preparation of profit plan is the starting point of all controls [illegible] period in adv[illegible]

(1) Fixed budget designed to remain unchanged irrespective of level of activity actually attained, and (2) Flexible budget designed to change in accordance with the level of activity actually attained. Variance analysis for the purpose of control can be effected only with reference to flexible budget. This is because these budgets are automatically geared to changes in volume and provide a dynamic basis for comparison. Any comparison of actual costs with the figures in a fixed or static budget will be deceptive unless the actual level of activity corresponds with the budgeted level. With the help of flexible budget and standard costs, the planned profit for a particular level of activity can be ascertained. The difference between the planned profit and actual profit is the operating profit variance.

Operating profit variance arises broadly due to two types of variances: (1) *Sales variances which may be due to the actual sale prices,* sales volumes and sales mix being different from the corresponding budgeted figures. (2) Cost variances which arise due to actual costs being different from planned costs. Cost variances may be classified according to the elements of cost and may be stated as follows:

(a) Material variances,
(b) Labour variances, and
(c) Overhead cost variances.

These variances can further be classified into various variances as follows :

Main Variance	*Further detailed classification*
1. *Material*	(a) Material Cost variance (b) Prices variance (c) Usage variance (d) Mix variance (e) Yield variance
2. *Labour*	(a) Labour cost variance (b) Rate of pay variance (c) Time variance or efficiency variance (d) Idle time variance (e) Labour mix variance (f) Calendar variance
3. *Overhead*	(a) Variable overhead variance (b) Fixed overhead variance (c) Fixed and variable overhead variance

A detailed discussion of these variances follows later in this chapter.

The following chart will give a complete break-up of the variances which account for the variance in the operating profit of the organisation (see page FSA-291).

MATERIAL VARIANCES

1. *Material cost variance.* This variance is the basic of all material variances and represents the difference between actual cost and standard cost of material. Actual cost of material can be obtained by multiplying actual quantity with actual price and standard cost can be obtained by multiplying standard quantity with standard price. It may be computed by using the formula

$$\text{Material cost variance} = (\text{Actual quantity} \times \text{Actual price}) - (\text{Standard quantity} \times \text{Standard price})$$

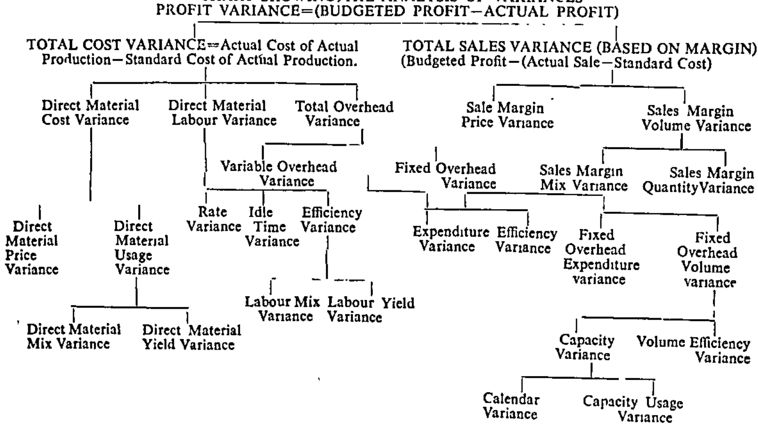
The variance is favourable when the actual cost is less than standard cost and unfavourable when standard cost is less than actual cost.

Material cost variance can be split into price and usage variances.

(i) *Material price variance.* Price variance occurs due to the actual price paid being more or less than the standard price. This is calculated by multiplying the actual usage with the difference between standard and actual prices. It may be expressed as follows :

$$\text{Material price variance} = (\text{Actual price} - \text{standard price}) \times \text{Actual usage}$$

CHART SHOWING THE ANALYSIS OF VARIANCES



This variance is considered favourable when the actual price is less than the planned price and unfavourable when the planned price is less than the actual price. Material price variance may occur due to the following factors :

(*a*) change in price of material
(*b*) change in transportation costs of materials
(*c*) purchasing a different quality at a different price
(*d*) quantity purchased being different from the planned lot size thus availing a different quantity discount than the one planned for.

Material price variance is usually the responsibility of the buyer of the organisation. But normally price variance is not controllable as it occurs due to factors beyond the control of the organisation. So it has limited significance and indicates only the correctness or otherwise of the forecasting of material prices. In exceptional cases it may reflect the inefficiency of the buying department in not thoroughly searching for the various sources, not availing the quantity and cash discounts and not securing economical deliveries. In such cases corrective action may be taken to change the suppliers and to secure economical transport. In some cases price variances may occur because of rush orders procured by the sales department or the delays due to bad planning by the production department. In such cases, obviously, the buyer is not to be blamed for adverse price variance.

(*ii*) *Material usage variance.* Usage variance occurs due to the actual quantity of material used for the production differing from the standard quantity. The standard quantity must always be calculated for the actual output given. The variance is computed by multiplying the difference in usage with the standard price and may be expressed as

$$\text{Material usage variance} = (\text{Actual usage} - \text{Standard usage}) \times \text{Standard price}$$

The variance is favourable when the actual usage is less than standard and unfavourable when the standard usage is less than actual. Unfavourable usage variance may result due to the following factors :

(*a*) purchase of inferior materials
(*b*) poor inspection of materials purchased
(*c*) inefficient use of materials by labour
(*d*) defective tools and machines
(*e*) improper engineering specifications
(*f*) theft and poor storage.

Generally, the responsibility for adverse usage variance rests with the production department, but in some cases it may be due to inferior materials purchased by the buyer or rush orders secured by the sales department. In any case, this variance in contrast to price variance is considered to be controllable.

Illustration 1. For producing a particular chemical the standard quantity of raw material required is 100 litres and the standard price per litre is Rs. 2·50. Compute the material variances when the actuals are :

(*a*) 120 litres at Rs. 3·00 per litre
(*b*) 90 litres for a total cost of Rs. 260.

Solution.

(*a*) (*i*) Material Cost Variance.

(Actual Quantity × Actual Price)
−(Standard Quantity × Standard Price)
=(120 × Rs. 3·00)−(100 × Rs. 2·50)
=Rs 360−Rs. 250=Rs. 110 (Adverse).

(*ii*) Material Price Variance.

(Actual Price−Standard Price) × Actual Usage
=(Rs. 3·00−Rs. 2·50) × 120=Rs. 60 Adverse.

(*iii*) Material Usage Variance.

(Actual Usage−Standard Usage) × Standard Price
(120−100) × 2·50=Rs. 50 Adverse.

Check

Material Cost Variance=Material Price Variance+Material Usage Variance

Rs 110 (Adverse)=Rs. 60 (Adverse)+Rs. 50 (Adverse)

(*b*) (*i*) Material Cost Variance.

(Actual Quantity × Actual Price)−(Standard Quantity × Standard Price)

Actual Quantity × Actual *Price is given as Rs. 260.*

∴ Rs. 260−(100 × Rs. 2·50)
=Rs. 260−Rs. 250=Rs. 10 (Adverse)

(*ii*) Material Price Variance.

In a problem of this type where the actual price per unit is not given but total actual cost is given, price variance may be obtained by the application of the following formula

Price Variance=(Standard Price × Actual Quantity)−Actual Cost

∴ Price Variance=(90 × 2·50)−Rs. 260=Rs. 35 (A)

(*iii*) *Material Usage Variance.*

(Actual Usage−Standard Usage) × Standard Price
=(90−100) × Rs. 2·50
=Rs. 25 (F)

Check

Material Cost Variance	= Material Price Variance	+ Material Usage Variance
Rs. 10 (A)	=Rs. 35 (A)	+ Rs. 25 (F)

Analysis of Material Usage Variance

In the case of industries where the input comprises of a combination of different materials, usage variance can be further analysed into mix variance and yield variance. Mix variance arises due to change in the [illegible] standard mix. Yield variance arises [illegible] yield for a given [illegible] achievement of a given output with lesser or more quantity than the standard input envisaged. *Usage variance is the result of both factors* and therefore is equal to the sum of mix and yield variances.

In a given case where the standard input and the actual input are one and the same and there is only a change in the proportion of mix, the entire usage variance is only due to change in mix. There is no yield variance in this case (Refer to Illustration 2). In another case there may be difference between the standard input and the actual output, with no details regarding output. In such a case the usage variance is partly due to mix and partly due to change in the input. In the absence of information regarding output it is not possible to calculate the yield variance and therefore a variance known as revised usage variance or sub-usage or rest of usage variance is calculated. The variance is analogous to yield variance. This variance explains the change due to change in the input quantity (Refer to Illustration 3). In cases where details are given regarding input as well as output quantities, the usage variance can be analysed into mix and yield variances (Refer to Illustration 5).

Material Mix Variance

Mix variance as stated earlier arises because of the difference between actual mix and standard mix. In the actual mix there may be a higher proportion of more expensive or less expensive materials than in the standard. This happens due to the scarcity of a particular material. When material *A* is not available, more of material *B* may be used and *vice versa*. According to the Institute of Cost and Management Accountants mix variance is "that portion of the direct materials usage variance which is due to the difference between the standard and actual composition of a mixture". The formula for calculating mix variance is given below :

Mix Variance = Standard cost of standard mix − Standard cost of actual mix.

i.e., Standard Price (Revised Standard quantity − Actual quantity)

Revised standard quantity is calculated by applying the standard proportion to the actual input. For example if a standard mix comprises of 60 units of *A* and 40 units of *B* and the actual quantity of *A* and *B* used are 100 units of *A* and 100 units of *B*, then the revised quantities are calculated as given below :

Standard proportion of *A* and *B* is 60 : 40 *i.e.*, 3 : 2
Actual input = 200 units

∴ Revised standard qauntity of *A*

$$=\frac{200\times 3}{5}=120 \text{ units}$$

Likewise, revised standard quantity of *B*

$$=\frac{200\times 2}{5}=80 \text{ units}$$

In other words, the standard mix has to be calculated with reference to the actual quantity used as input and, therefore, the resulting quantities are called revised standard quantities.

Case I. Usage variance comprising of mix variance only.

Illustration 2. From the data given below compute material mix variance.

	Standard	Actual
Material *A*	40 units @ Rs. 10 per unit	50 units @ Rs. 12 per unit
Material *B*	60 units @ Rs. 5 per unit	50 units @ Rs. 4 per unit
	100	100

Solution. *Standard Cost of standard mix*

Material *A* 40 units @ Rs. 10 per unit	Rs 400
Material *B* 60 units @ Rs. 5 per unit	300
Total	700

Standard Cost of actual mix

Material *A* 50 units @ Rs 10 per unit	Rs 500
Material *B* 50 units @ Rs 5 per unit	250
Total	750

Mix variance = Standard Cost of standard mix − Standard Cost of actual mix
= Rs. 700 − Rs. 750 = Rs. 50 (*A*)

In the above example there is no difference between the usage variance and mix variance. The usage variance is also Rs 50 (*A*) as can shown below :

Usage variance = (Actual usage − Standard usage) × Standard price
Material *A* = (50 − 40) × Rs 10 = Rs. 100 (*A*)
Material *B* = (50 − 60) × Rs. 5 = Rs 50 (*F*)
Total Rs. 50 (*A*)

Case II. Usage variance comprising of Mix and Revised usage variance.

Illustration 3. From the data given below compute the usage variance and show that it is the sum of mix variance and revised usage (or subusage) variance.

		Standard		Actual
Material *A*	40	units @ Rs. 10 per unit	60	units @ Rs. 12 per unit
Material *B*	60	units @ Rs. 5 per unit	60	units @ Rs. 4 per unit
	100		120	

Solution.

Usage variance = (Actual usage − Standard usage) × Standard price
Material *A* (60 − 40) × Rs. 10 = Rs. 200 (*A*)
Material *B* (60 − 60) × Rs. 5 = Rs. —
Total Rs. 200 (*A*)

In a problem of this type to find out the mix variance, the standard quantities must be revised in conformity with actual input. Such quantities are known as revised standard quantities. Revised standard quantity is calculated by the following formula

$$\text{Revised standard quantity} = \frac{\text{Standard quantity}}{\text{Total weight of Standard mix}} \times \text{Total weight of actual mix}$$

$$\text{Material } A = \frac{40}{100} \times 120 = 48 \text{ units.}$$

$$\text{Material } B = \frac{60}{100} \times 120 = 72 \text{ units.}$$

Standard Cost of revised mix

Material A 48 units @ Rs. 10 per unit	Rs.	480
Material B 72 units @ Rs. 5 per unit		360
	Total	840

Standard Cost of actual mix

Material A 60 units @ Rs. 10 per unit	Rs.	600
Material B 60 units @ Rs. 5 per unit		300
	Total	900

Mix Variance

=Standard Cost of revised mix−Standard Cost of actual mix
=Rs. 840−Rs. 900=Rs. 60 (A)

Mix variance can be calculated by the alternative formula

$$\text{Mix variance} = \left(\text{Revised standard quantity} - \text{Actual quantity}\right) \times \text{Standard price.}$$

Revised usage or sub-usage variance. This variance arises due to change in the revised standard quantities from the original standard quantities envisaged. This is in a way the usage variance proper. The formula for calculating the variance

$$\text{Revised usage variance} = \text{Standard Price} \times \left(\text{Standard quantities} - \text{Revised Standard quantity}\right)$$

Material	A=Rs. 10 (40−48)=	80 A
Material	B=Rs. 5 (60−72)=	60 A
	Total	140 (A)

Check :

$$\text{Material usage variance} = \text{Material mix variance} + \text{Revised usage variance}$$

$$\text{Rs. } 200\ (A) = \text{Rs. } 60\ (A) + \text{Rs. } 140\ (A)$$

Case III. Usage variance comprising mix and yield variances.

Illustration 5 given after yield variance will illustrate the case.

Yield Variance

Yield variance arises due to the difference between standard yield and actual yield. Stated alternatively, yield variance arises due to the actual loss in the process being more or less than standard loss. Standard yield is the output of the process after allowing for standard loss. Likewise, actual yield is the output of the process after allowing for actual loss. Yield variance is valued at standard cost per unit of output. It may be expressed by the following formula

$$\text{Material yield variance} = \left(\text{Actual yield} - \text{Standard yield for actual input}\right) \times \text{Standard cost per unit of output.}$$

Illustration 4. From the data given below compute yield variance.

Standard		*Actual*	
Price Per litre of input	Rs. 9	Input	500 litres
Standard yield	90%	Output	440 litres.

Solution. *As the standard yield is 90% of input, per every unit of output the input should be $\frac{10}{9}$ litres.*

$\therefore$ Standard Cost per unit of output $= \frac{10}{9} \times$ Rs. 9 = Rs. 10

Standard yield for the actual input = 90% of 500 litres
= 450 litres

Actual yield = 440 litres.

$\therefore$ Material yield variance = (440 − 450) × Rs. 10 = Rs. 100 (*A*)

Illustration 5. Standard Chemical Co. Ltd. produces a certain chemical, the standard material cost being

40 per cent material *X* at Rs. 45 per kg.
60 per cent material *Y* at Rs. 120 per kg.

A standard loss of 10 per cent is expected in production.

During a period the actuals were as given below:

84 kg. Material *X* at Rs. 46 per kg.
116 kg. Material *Y* at Rs. 118 per kg.

and produced 182 kg. of the chemical. Compute the material variances.

[*Adapted C.A. (Final) November 1977*]

Solution.

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Material	*Standard Cost*			*Actual Cost*			*Standard Cost of Actual Mix*		
	Qty.	*Price*	*Cost*	*Qty*	*Price*	*Cost*	*Qty.*	*Price*	*Cost*
X	80	45	3,600	84	46	3,864	84	45	3,780
Y	120	120	14,400	116	118	13,688	116	120	13,920
Total	200		18,000	200		17,552	200		17,700
Loss	20		—	18		—	18		
Net	180		18,000	182		17,552	182		

Standard material cost per unit of output $= \frac{\text{Rs. } 18{,}000}{180} = \text{Rs. } 100$

Standard material cost of actual quantity produced $= 182 \text{ kg.} \times \text{Rs. } 100$
$= \text{Rs. } 18{,}200.$

Material Variances

(i) *Material Cost Variance.* This is the difference between the standard material cost of the actual quantity and its actual cost.

Rs. 18,200 – Rs. 17,552 = Rs. 648 (*F*)

Since the actual cost is less than the standard cost the variance is favourable.

Material Rate Variance

This is calculated as the difference between the standard and actual prices for the actual quantities of materials used. Expressed by the formula

$$\text{Actual Quantity} \times \left(\begin{matrix}\text{Standard}\\\text{Price}\end{matrix} - \begin{matrix}\text{Actual}\\\text{Price}\end{matrix} \right)$$

Material *X* :	84 kg. (Rs. 45 – Rs. 46)	= Rs. 84 (*A*)
Material *Y* :	116 ks. (Rs. 120 – Rs. 118)	= Rs. 232 (*F*)
	Total	= Rs. 148 (*F*)

For material *X* the variance is adverse since the actual price is more than the standard price. The variance for *Y* is favourable because the actual price is less than the standard price.

Material Usage Variance

This is calculated by multiplying the difference in actual and standard quantities with standard price. Expressed by the formula :

$$\text{Standard Price} \times \left(\begin{matrix}\text{Actual}\\\text{Quantity}\end{matrix} - \begin{matrix}\text{Standard}\\\text{Quantity}\end{matrix} \right)$$

Here the standard quantities needed for actual output must be calculated as shown below :

$$\text{Material } X = \frac{80}{180} \times 182 = \frac{728}{9} \text{ kg.}$$

$$\text{Material } Y = \frac{120}{180} \times 182 = \frac{364}{3} \text{ kg.}$$

Now using the formula

$$\text{Material } X : \text{Rs. } 45\left(84 - \frac{728}{9} \right) = \text{Rs. } 140\ (A)$$

$$\text{Material } Y : \text{Rs. } 120\left(116 - \frac{364}{3} \right) = \text{Rs. } 640\ (F)$$

$$\text{Total} = \text{Rs. } 500\ (F)$$

For material X the actual quantity is more than the standard and, therefore, the variance is adverse. For material Y the standard quantity is more than the actual quantity and hence the variance is favourable.

Check I.

$$\text{Material Cost variance} = \text{Material Price variance} + \text{Material usage variance}$$

$$\text{Rs. } 648\ (F) = \text{Rs. } 148\ (F) + \text{Rs. } 500\ (F)$$

Material Mix Variance

This is the difference between the standard cost of the standard mix and standard cost of actual mix.

$$\text{Rs. } 18{,}000 - \text{Rs. } 17{,}700 = \text{Rs. } 300\ (F)$$

Since the standard cost of actual mix is less than the standard cost of standard mix the variance is favourable

Material Yield Variance

This is the standard cost of the difference in actual yield andjthe standard yield. If the actual yield is more than the standard the variance is favourable and *vice versa*. Expressed by formula

$$\text{Standard material Cost Per unit of output} \times \left[\text{Actual yield} - \text{Standard yield}\right]$$

$$= \text{Rs. } 100 \times [182 - 180] = \text{Rs. } 200\ (F)$$

Check II.

$$\text{Material usage Variance} = \text{Material Mix Variance} + \text{Material yield Variance}$$

$$\text{Rs. } 500\ (F) = \text{Rs. } 300\ (F) + \text{Rs. } 200\ (F)$$

Check III.

$$\text{Material Cost Variance} = \text{Material Price Variance} + \text{Material Mix Variance} + \text{Material Yield Variance}$$

$$\text{Rs. } 648\ (F) = \text{Rs. } 148\ (F) + \text{Rs } 300\ (F) + \text{Rs. } 200\ (F)$$

Illustration 6 From the following data for May 1981 of a factory, calculate (*a*) Material cost variance, (*b*) Material price variance, (*c*) Material usage variance, (*d*) Material mix variance, (*e*) Material yield variance.

Name of Material	*Standard*		*Actual*	
	Kg.	Rate	Kg	Rate
X	8,000	1·05	7,500	1·20
Y	3,000	2·15	3,300	2·30
Z	2,000	3·30	2,400	3·50

[*I.C.W.A. (Inter) Dec. 1981*]

Solution.

1. Material Cost Variance

Formula :

Material Cost Variance = Standard Cost − Actual Cost

Material	Standard			Actual		
	Kg.	Rate	Total Rs.	Kg.	Rate	Total Rs.
X	8,000	1·05	8,400	7,500	1·20	9,000
Y	3,000	2·15	6,450	3,300	2·30	7,590
Z	2,000	3·30	6,600	2,400	3·50	8,400
	13,000		21,450	13,200		24,990

Material Cost Variance$=21{,}450-24{,}990=3{,}540$ (*A*)

Material Price Variance

Material price variance=Actual Quantity (Standard Price —Actual Price)

			Rs.	
X	=	7,500 (1·05−1·20)	=1,125	(*A*)
Y	—	3,300 (2·15−2·30)	= 495	(*A*)
Z	=	2,400 (3·30−3·50)	= 480	(*A*)
		Total	2,100	(*A*)

Material Usage Variance

Material usage variance=

Standard Price (Standard quantity—Actual quantity)

			Rs.
X	=	1·05 (8,000−7,500)	525 (*F*)
Y	=	2·15 (3,000−3,300)	645 (*A*)
Z	=	3·30 (2,000−2,400)	1,320 (*A*)
		Total	1,440 (*A*)

Material Mix Variance

Material mix variance=

Standard price (Revised Standard Quantity—Actual Quantity)

Revised Standard quantity=

$$\frac{\text{Total of Actual mix}}{\text{Total of standard mix}}\times\text{Standard quantity of each material.}$$

Revised Standard quantity

$$X=\frac{13{,}200}{13{,}000}\times 8{,}000=8{,}123$$

$$Y=\frac{13{,}200}{13{,}000}\times 3{,}000=3{,}046$$

$$Z=\frac{13{,}200}{13{,}000}\times 2{,}000=2{,}031$$

	Rs.
$X=1{\cdot}05\ (8{,}123-7{,}500)=$	654·15 (*F*)
$Y=2{\cdot}15\ (3{,}046-3{,}300)=$	546·10 (*A*)
$Z=3{\cdot}30\ (2{,}031-2{,}400)=$	1,217·70 (*A*)
Total	1,109·65 (*A*)

Revised Usage Variance

Whenever output details are not given it is not possible to calculate yield variance. Therefore, to reflect the yield variance the revised usage variance is calculated as given below :

Formula :

Standard price (Standard quantity—Revised Standard quantity)

	Rs.
$X=1{\cdot}05\ (8{,}000-8{,}123)=$	129·15 (*A*)
$Y=2{\cdot}15\ (3{,}000-3{,}046)=$	98·90 (*A*)
$Z=3{\cdot}30\ (2{,}000-2{,}031)=$	102·30 (*A*)
Total	330·35 (*A*)

Check I

Material Cost variance

=Material price variance+Material usage variance

3,540 (*A*)=Rs. 2,100 (*A*)+Rs. 1,440 (*A*)

Check II

Material usage variance

=Material Mix variance+Material Revised usage variance

1,440 (*A*)=Rs. 1,109·65 (*A*)+Rs. 330·35 (*A*)

Illustration 7. The standard material cost per 100 kg. of Chemical *D* in made up of—

Chemical *A*—30 kg @ Rs. 4/- per kg.
Chemical *B*—40 kg. @ Rs 5/- per kg.
Chemical *C*—80 kg. @ Rs. 6/- per kg.

In a batch, 500 kg. of Chemical D was produced from a mix of—

Chemical *A*—140 kg. at a cost of Rs. 588
Chemical *B*—220 kg. at a cost of Rs 1,056, and
Chemical *C*—440 kg. at a cost of Rs. 2,860

Compute the material usage, price and mix variances.

[Adapted ACS Final, Dec. 1979]

Solution.

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Statement showing standard material cost and actual material cost for producing 500 kg. of chemical *D*

	Standard			Actual		
	Qty.	Price per kg.	Value	Qty.	Price per kg.	Value
	kg.	Rs.	Rs.	kg.	Rs.	Rs.
Chemical *A*	150	4	600	140	4·20	588
Chemical *B*	200	5	1,000	220	4·80	1,056
Chemical *C*	400	6	2,400	440	6·50	2,860
	750		4,000	800		4,504
Loss	250		—	300		—
Output	500		4,000	500		4,504

Computation of Variances

(*a*) Material Cost Variance :

Actual Cost−Standard Cost

Rs. 4,504−Rs. 4,000=Rs. 504 (*A*).

(*b*) Material Price Variance :

Actual Quantity (Actual Price−Standard Price)

=140 (Rs. 4·20−Rs. 4·00)+220 (Rs. 4·80−Rs. 5·00)+440 (Rs. 6·50−Rs. 6·00)

=Rs. 204 (*A*)

(*c*) Material Usage Variance :

Standard Price (Actual Quantity−Standard Quantity)

=Rs. 4 (140−150)+Rs. 5 (220−200)+Rs. 6 (440−400)

=Rs. 300 (*A*)

Check :

Material Cost Variance=Material Price Variance +Material Usage Variance

∴ Rs. 504 (*A*)=Rs. 204 (*A*)+Rs. 300 (*A*).

Material usage variance can be divided into (*i*) Material mix variance and (*ii*) Material yield variance.

(*i*) Material Mix Variance :

For this, we have to calculate revised standard proportions of actual input, which may be done with the help of the following formula :

$$\frac{\text{Standard quantity}}{\text{Total standard input}} \times \text{Total actual input}$$

Hence :

$$\text{Chemical } A = \frac{150}{750} \times 800 = 160 \text{ kg.}$$

$$\text{Chemical } B = \frac{200}{750} \times 800 = \frac{640}{3} \text{ kg.}$$

$$\text{Chemical } C = \frac{400}{750} \times 800 = \frac{1,280}{3} \text{ kg.}$$

Material Mix Variance is :

$=$Standard Cost of revised Std. Mix)$-$(Std. Cost of actual mix)

$$=\left(160\times \text{Rs. }4+\frac{640}{3}\times \text{Rs }5+\frac{1,280}{3}\times \text{Rs. }6\right)$$

$$-(140\times \text{Rs. }4+220\times \text{Rs.}5+440\times \text{Rs. }6)$$

$=$Rs. 33·33 (A)

(*ii*) Material Yield Variance :

$=$Standard cost per unit (Standard loss on actual mix $-$Actual loss on actual mix)

$$=\text{Rs. }\frac{4,000}{500}\times\left(\frac{250}{750}\times 800-300\right)$$

$=$Rs. 266·67

Check :

Material Usage Variance$=$Material Mix Variance $+$Material Yield Variance

$\therefore$ Rs. 300 (A)$=$Rs. 33·33 (A)$+$Rs 266·67 (A)

Note. Material yield variance can be further calculated in the following two ways :

(*a*) *Revised Usage Variance Method*.

The formula for using the method is,
Standard price (Standard mix$-$Revised mix)

Chemical A : Rs. 4 (150$-$160)$=$ Rs. 40 (A)

Chemical B : Rs. $5\left(200-\frac{640}{3}\right)$ $=$Rs. 66·65 (A)

Chemical C ; Rs. $6\left(440-\frac{1,280}{3}\right)$ $=$Rs. 160·02 (A)

Total Rs. 266·67 (A)

(*b*) *Material Yield Variance based on production basis* :

The formula for using the method is,
Standard cost per unit (Actual production $-$Revised standard production)

$$\therefore \text{ Standard cost per unit}=\frac{\text{Total Standard Value}}{\text{Total Standard Quantity}}$$

$$=\text{Rs. }\frac{4,000}{500}=\text{Rs. }8$$

$\therefore$ Revised standard production

$$=\frac{500}{750}\times 800$$

$$=533·33 \text{ kg.}$$

By applying the formula

Rs. 8 (500$-$533·33)$=$Rs. 266·67 (A)

The above workings clearly indicate that the revised wage variance and yield variance are one and the same.

LABOUR VARIANCES

'Labour Variances' or 'wages variances' as they are sometimes called analyse the variances of actual labour cost from standard labour cost due to such factors as rate of pay, labour efficiency, labour mix, idle time, etc. Labour variances are similar to material variances in many respects and all that the student is required is to substitute the word 'time' in the place of 'quantity'.

Direct Labour Cost Variance

Direct labour cost variance is the variance arising due to the actual direct wages differing from the standard direct wages specified for the activity achieved. The formula is

Direct Labour Cost Variance = Standard direct labour cost − Actual direct labour cost

Alternatively,

Direct Labour Cost variance = (Standard direct labour hours × Standard labour rate) − (Actual direct labour hours × Actual labour rate per hour)

In cases where the actual output differs from the standard output, standard direct labour cost must be calculated for the actual quantity produced, by multiplying the standard direct labour cost per unit with the number of units actually produced.

Analysis of Direct Labour Cost Variance

An in the case of material, direct labour cost variance arises primarily due to two factors. They are (1) actual rates of pay differing from the standard and (2) the labour taking more or less time than the standard. The variance arising due to first factor is known as the 'rate of pay variance'. The variance arising due to the second factor is due to changes in the efficiency of labour and is, therefore, termed as 'Labour Efficiency Variance.'

Rate of Pay Variance

This is also called wages rate variance and is the difference between the standard rate of wages and actual rate paid. In order to calculate the magnitude of the wage rate variance, the difference between the two rates is multiplied by the actual time for which wages are paid. This wage rate variance is said to be favourable when the actual wage rate is less than the standard rate and adverse when the actual rate is more than the standard rate. This variance is similar to the material price variance. The formula is :

$$\text{Rate of Pay Variance} = \begin{pmatrix}\text{Standard wage rate} \\ -\text{Actual wage rate}\end{pmatrix} \times \text{Actual Time.}$$

This formula should be applied separately for each type of workers getting wages at different rates.

This variance discloses the effect of employing more skilled workers than originally planned on the labour cost. Likewise, management can also know the impact of overtime payments on labour cost. This variance arises due to the following causes.

1. Revision of wage rate due to fresh wage agreement with Workers Unions.
2. Employing workers of a different grade from the one envisaged in the standard.
3. Payment of overtime allowance more or less than that envisaged.

Labour Efficiency Variance

This variance is similar to 'Material usage' variance. This variance arises when labour takes more or less time than the standard envisaged for a given output. This arises due to changes in the actual efficiency from the standard determined. Hence the variance is called Labour Efficiency Variance. It is defined as "that portion of the direct wages variance which is due to the difference between the standard labour hours specified for the activity achieved and the actual labour hours expended".

The formula is :

Direct Labour Efficiency Variance=
(Actual direct hours worked − Standard hours for actual output)
× Standard wage rate

This variance arises due to the following factors :

1. Use of sub-standard employees due to :
   (*a*) inefficient training
   (*b*) incorrect instructions
   (*c*) workers' dissatisfaction.
2. Failure to obtain satisfactory results from employees due to their
   (*a*) unsatisfactory working conditions such as excessive heating, poor lighting, lack of sanitation, etc.,
   (*b*) bad planning resulting in the delayed supply of tools, materials and instructions,
   (*c*) use of defective and poorly maintained machinery, and
   (*d*) inefficient supervision.

Illustration 8. The information as per standard cost card is given below :

Labour rate	25 Paise Per hour
Hours set per unit for production	2·5

The actual production data is given below :

Units produced	210
Labour rate	28 Paise per hour
Hours worked	580

Calculate the labour cost variance, labour rate variance and labour efficiency variance. ***(M. Com., Madras May 1981)***

Solution.

Units produced 210

Standard labour hours required for 210 units $= 210 \times 2.5$ hours $= 525$ hours

(*i*) *Labour Cost Variance*

(Actual Hours × Actual Rate) − (Standard hours for actual productio × Standard Rat

$= (580 \times 28 \text{ P}) - (525 \times 25 \text{ P})$
$= \text{Rs. } 31.15 \text{ (A)}$

(*ii*) *Labour rate variance*

Actual time × (Actual rate − Standard rate)

$= 580 (28 \text{ P} - 25 \text{ P}) = \text{Rs. } 17.40 \text{ (A)}$

(*iii*) *Labour Efficiency Variance*

(Actual hours for actual output − Standard hours for actual ouput) × Standard labour rate per hou

$= (580 - 525) \times 25 \text{ P} = \text{Rs. } 13.75 \text{ (A)}$

Check.

Labour Cost variance = Labour rate variance + Labour efficiency variance

Rs. 31.15 (A) = Rs. 17.40 (A) + Rs. 13.75 (A)

Analysis of Labour Efficiency Variance

Labour efficiency variance mainly arises due to two factors :

(*a*) change in the labour mix due to shortage of a particular grad and or grades of labour.

(*b*) change in the efficiency of labour from the standard envisaged.

The change in efficiency arising due to the first factor is terme as 'Mix' variance. The change in efficiency arising due to the secon factor is termed as Revised Efficiency Variance or 'yield variance.'

Labour Mix Variance

Labour mix variance is the result of employing grades of labou different from the standard fixed in advance. It is calculated at th standard rate of pay since the effect of variance in the rates of pay has already been considered in labour rate variance.

The formula is :

Labour Mix Variance = Standard cost of standard mix − Standard cost of actual mix

It can also be expressed as :

Mix Variance = Standard Rate (Standard mix of actual labou − Actual mix of actual labour)

Yield Variance

Yield variance arises due to the factors that due to variation in efficiency, the labour is able to produce more or less than the standard output envisaged. The formula is

$$\text{Labour yield variance} = \text{Standard labour cost per unit}\left(\text{Standard production for actual mix} - \text{Actual production}\right)$$

Illustration 9. The standard labour complement and the actual labour complement engaged in a week for a job are as under :

	Skilled workers	*Semi-skilled workers*	*Unskilled workers*
(A) Standard number of workers in the gang	32	12	6
(B) Standard wage rate per hour	Rs. 3	Rs. 2	Re. 1
(C) Actual number of workers employed in the gang during the week	28	18	4
(D) Actual wage rate per hour	Rs 4	Rs 3	Rs. 2

During the 40-hour working week the gang produced 1,800 standard labour hours of work.

Calculate : (*i*) Labour cost variance, (*ii*) Labour rate variance, (*iii*) Labour efficiency variance, (*iv*) Labour mix variance and (*v*) Labour yield variance. [*Adapted from C A (Inter) November 1980*]

Solution.

WORKINGS

Category of Workers	*Actuals*			*Standard*			*Standard cost of actual mix*		
	Hours	*Rate*	*Total*	*Hours*	*Rate*	*Total*	*Hours*	*Rate*	*Total*
Skilled workers	1120	4	4480	1280	3	3840	1120	3	3360
Semi-skilled workers	720	3	2160	480	2	960	720	2	1440
Unskilled workers	160	2	320	240	1	240	160	1	160
Total			6960			5040			4960

Labour Cost Variance

Standard labour cost of the actual output – Actual labour cost of the output.

Standard labour cost per standard hour of output

$$= \text{Rs. } \frac{5{,}040}{2{,}000} = \text{Rs. } 2.52$$

Standard labour cost of the actual output

$$= 1{,}800 \times \text{Rs. } 2.52$$
$$= \text{Rs. } 4{,}536$$

Actual cost of the actual output

$$= \text{Rs. } 6{,}960$$

Total Labour Cost Variance

$$= \text{Rs. } 4{,}536 - \text{Rs. } 6{,}960$$
$$= \text{Rs. } 2{,}424\ (A)$$

Labour Rate Variance

Actual Hours × (Actual Rate − Standard Rate)

Skilled workers	1,120 (Rs. 4 − Rs. 3) =	Rs. 1,120 (*A*)
Semi-skilled workers	720 (Rs. 3 − Rs. 2) =	Rs. 720 (*A*)
Unskilled workers	160 (Rs. 2 − Rs. 1) =	Rs. 160 (*A*)
	Total =	Rs. 2,000 (*A*)

Labour Efficiency Variance

For calculating labour efficiency variance, one should find out the revised standard time for actual output. For 2,000 hours of standard production standard labour mix is given. Since the actual output is 1,800 standard hours the revised standard mix will be

Skilled workers $\frac{1{,}280}{2{,}000} \times 1{,}800 = 1{,}152$ hours

Semi-skilled workers $\frac{480}{2{,}000} \times 1{,}800 = 432$ hours

Unskilled workers $\frac{240}{2{,}000} \times 1{,}800 = 216$ hours

Total 1,800 hours

Now Labour efficiency variance may be calculated by applying the formula :

$$\text{Standard Rate} \times \left[\begin{array}{c}\text{Actual Time}\\ \text{for actual output}\end{array} - \begin{array}{c}\text{Standard Time}\\ \text{for actual output}\end{array}\right]$$

Skilled	Rs. 3 (1,152 − 1,120) =	Rs. 96 (*F*)
Semi-skilled	Rs. 2 (432 − 720) =	Rs. 576 (*A*)
Unskilled	Rs. 1 (216 − 160) =	Rs. 56 (*F*)
	Total =	Rs. 424 (*A*)

Check I

$$\begin{array}{ccccc}\text{Labour Cost variance} & = & \text{Labour Rate variance} & + & \text{Labour efficiency variance}\\ \text{Rs. } 2{,}424\ (A) & = & 2{,}000\ (A) & + & \text{Rs. } 424\ (A)\end{array}$$

Now the Labour efficiency variance can be split into Labour Mix variance and Revised Labour efficiency variance (or rest of labour efficiency variance).

Mix Variance

As there is no difference in the standard hours and actual hours mix variance can be calculated as the difference between standard cost of standard mix and standard cost of actual mix.

Standard Cost of standard mix = Rs. 5,040
Standard Cost of actual mix = Rs. 4,960

∴ Mix Variance = Rs. 5,040 – Rs. 4,960 = Rs. 80 (*F*)

The variance is favourable as the standard cost of actual mix is less than the standard cost of the standard mix.

Revised Labour Efficiency Variance

This is the efficiency variance arising for reasons other than change in the mix. This is calculated by the application of the following formula :

$$\text{Revised Efficiency Variance} = \text{Standard Rate}\left(\text{Standard Time} - \text{Revised Standard Time}\right)$$

Skilled workers	Rs. 3 (1,280 – 1,152) = 384 (*A*)
Semi-skilled workers	Rs. 2 (480 – 432) = 96 (*A*)
Unskilled workers	Re. 1 (240 – 216) = 24 (*A*)
Total	= 504 (*A*)

Check II

$$\text{Labour Efficiency Variance} = \text{Labour Mix Variance} + \text{Revised Labour Efficiency Variance}$$

Rs. 424 (*A*) = Rs. 80 (*F*) + Rs. 504 (*A*)

Revised Labour Efficiency variance can also be viewed as Labour yield variance and can be calculated by the application of the following formula :

$$\text{Labour yield Variance} = \text{Standard Cost Per unit} \times \left(\text{Standard Production for actual mix} - \text{Actual Production}\right)$$

= Rs. 2·52 (2,000 – 1,800)
= Rs. 504 (*A*)

Check III

$$\text{Labour Cost variance} = \text{Labour rate variance} + \text{Labour mix variance} + \text{Labour yield variance}$$

Rs. 2,424 (*A*) = Rs. 2,000 (*A*) + Rs. 80 (*F*) + Rs 504 (*A*)

Idle Time Variance

Analysing efficiency variance one must also have regard to the loss [illegible] Such variance arising due to idle [illegible] i. represents the payments for idle [illegible]

Idle Time Variance = Idle Time × Standard Rate

Idle time variance must be reported to management as its control is necessary. If possible idle time variance may further be subdivided as idle time due to lack of material, power failure, breakdown, strike & so on representing the various causes responsible for idle time.

When idle time variance is calculated, efficiency variance will exclude idle hours and the total wages variance will be the sum of the rate variance, efficiency variance and idle time variance.

Illustration 10. In a factory, the normal number of workers employed in a department is 50, the normal number of hours paid for in a week are 40, and the standard rate of pay per hour is Re. 0·80. The standard output of the department per hour, taking into account normal idle time, is 20 units.

In a particular week, it was ascertained that 1,000 units were produced despite 20% of time paid for was lost owing to breakdown of machinery and that the actual rate of pay was Re. 0·90 per hour. You are required :

(*i*) to calculate the wages variance, and
(*ii*) to show its division into : wages rate variance, abnormal idle time variance and labour efficiency variance.

[*C.A.* (*Final*) *November 1977*]

Solution.

Wages variance

Standard labour cost – Actual labour cost

Standard labour cost per unit $= \frac{50 \times \cdot 8}{20.} =$ Rs. 2.

Standard labour cost for actual production

$= 1{,}000 \times$ Rs. $2 =$ Rs. 2,000

Actual Labour Cost $= 50 \times 40 \times$ Rs. $0{\cdot}90 =$ Rs. 1,800

∴ Wages Variance $=$ Rs. 2,000 – Rs. 1,800 $=$ Rs. 200 (*F*)

Wage Rate Variance

$$\text{Actual Labour Hours} \times \left(\text{Standard Labour Rate} - \text{Actual Labour Rate}\right)$$

50×40 (Rs. 0·80 – Rs. 0·90) $=$ Rs. 200 (*A*)

Labour Efficiency Variance

Standard Labour Rate × (Actual Hours – Standard Hours)

Rs. 0·80 (1,600 – 2,500)

$=$ Rs. 720 (*F*)

Standard hours for actual output $= \frac{50}{20} \times 1{,}000 = 2{,}500.$

Actual hours taken are net of Abnormal Idle Time.

Abnormal Idle Time Variance*

Idle hours × Standard Rate per hour

$= 40 \times$ Rs. $0{\cdot}80 = 320$ (*A*)

---

* It must be obvious to the student that Idle Time variance is always adverse.

Check :

$$\underset{\text{variance}}{\text{Wages}} = \underset{\text{variance}}{\text{Wage Rate}} + \underset{\text{variance}}{\text{Labour Efficiency}} + \underset{\text{variance}}{\text{Idle Time}}$$
$$\text{Rs. } 200\,(F) = 200\,(A) + 720\,(F) + 320\,(A)$$

OVERHEAD VARIANCES

Overhead Variance arises due to the difference between actual overheads and standard overheads absorbed. In other words, it is a simple case of over or under-absorption of overheads.

Overhead variance analysis can be done in two ways. They are : (1) in terms of hours of production ; and (2) in terms of units produced. When production comprises diverse products, it has to be expressed in terms of standard hours and in such cases analysis must be done by measuring production in terms of hours. Where the production comprises of homogeneous products the analysis can be done in terms of units. Before [illegible] ential to under- [illegible]

Fixed Overhead Absorption Rate (FOAR)

$$= \frac{\text{Budgeted fixed overheads}}{\text{Budgeted hours of production}}$$

Variable Overheads Absorption Rate (VOAR)

$$= \frac{\text{Budgeted variable overheads}}{\text{Budgeted hours of production}}$$

Standard hours production = Actual production expressed in terms of standard hours.

Illustration 11. From the data given below express the production for the month in terms of standard hours of production (SHP)

Product	*No. of units produced*	*Standard hours per unit*
Table	20	10
Chair	30	5
Shelf	40	3

Solution.

Product	*No. of units produced*	*Standard hours per unit*	*Standard hours of production (SHP)*
Table	20	10	200
Chair	30	6	150
Shelf	40	3	120
Actual production in term of standard hours			470

If in the above example 500 hours were spent on production, they are known as the clock hours.

Fixed overheads absorbed =

Standard hours of production $\times$ Fixed overheads absorption rate
(SHP $\times$ FOAR)

Variable overheads absorbed=

Standard hours of production $\times$ Variable overheads absorption rate
(SHP $\times$ VOAR)

Total overheads absorbed=

Fixed overheads absorbed + Variable overheads absorbed.

Overhead Variance

This is the difference between the standard cost of overhead absorbed in the output achieved and the actual overhead cost. The formula is :

Overhead Variance = Actual overhead − SHP (FOAR + VOAR)

This can be further analysed into fixed and variable overhead variances.

Fixed overhead variance is the difference between actual fixed overheads and absorbed fixed overheads. The formula is :

Fixed overhead variance = Actual fixed overheads − (SHP $\times$ FOAR)

Likewise, variable overhead variance can be calculated by the formula :

Variable overhead variance = Actual variable overhead
− (SHP $\times$ VOAR)

Analysis of Variable Overheads Variance

Variable overheads variance is analysed into Expenditure variance and Efficiency variance. Expenditure variance arises due to the difference between actual and allowed variable overheads. Allowed variable overheads are calculated by multiplying the actual clock hours with the variable overhead absorption rate. The formula for Expenditure variance is :

Variable Overhead Expenditure Variance

= Actual Variable overheads − (Clock hours $\times$ VOAR)

Efficiency variance arises due to standard hours of production being more or less than the actual clock hours. This variance is calculated as the difference between allowed variable overheads and absorbed variable overheads. The formula is ·

Variable Overhead Efficiency Variance = Clock hours
− (SHP $\times$ VOAR)

Illustration 12. From the data given below analyse variable overhead variances for the month of June 1982.

Budgeted hours of production	=	1,000
Budgeted variable overheads	=	Rs. 5,000
Actual variable overheads	=	Rs. 5,500
Actual clock hours	=	900
Standard hours of production	=	950

Solution.

$$VOAR=\frac{\text{Rs. } 5{,}000}{1{,}000}=\text{Rs. } 5 \text{ per hour.}$$

Variable overhead variance

=Actual variable overheads−(SHP × VOAR)
=Rs. 5,500−(950×5)=Rs. 750 (*A*)

Variable overhead expenditure variance

=Actual variable overheads−(Clock hours × VOAR)
=Rs. 5,500−(900×5)=Rs. 1,000 (*A*)

Variable overhead efficiency variance

=(Clock hours−SHP × VOAR)
(900−950)×Rs. 5=250 (*F*)

Check :

Variable overhead variance = Variable overhead expenditure variance + Variable overhead efficiency variance

Rs. 750 (*A*)=Rs. 1,000 (*A*)+Rs. 250 (*F*)

Analysis of Fixed Overhead Variances

Fixed overhead variance arises due to under or over-absorption of fixed overheads and is the difference between actual fixed overhead incurred and the absorbed fixed overheads. This variance can be analysed into fixed overhead expenditure variance and fixed overhead volume variance. *The first variance arises due to spending more or less than the* budgeted overheads and the second one is the result of actual volume of production differing from planned volume.

Fixed Overhead Expenditure Variance

This variance represents the difference between the actual fixed overheads and the budgeted fixed overheads. The formula is

Fixed overhead expenditure variance

=Actual fixed overheads−Budgeted fixed overheads

Volume Variance

As already indicated volume variance arises when actual production is more or less than the budgeted production. The variance is favourable when the actual production is more than budgeted production and *vice versa*. For calculating this variance under the hour method of calculation actual production must be converted into standard hours of production.

The formula for this variance is :

Volume variance=(SHP−Budgeted hours) × FOAR

Illustration 13. From the data given below, calculate

1. Fixed overhead variance.
2. Fixed overhead expenditure variance.
S. Fixed overhead volume variance.

Budgeted fixed overheads	=Rs. 30,000
Budgeted hours of production	= 1,000
Actual fixed overheads	=Rs. 33,000
Actual clock hours	= 900
Standard hours of production	= 950

Solution.

$$\text{FOAR} = \text{Rs. } \frac{30,000}{1,000} = \text{Rs. } 30 \text{ per hour.}$$

Fixed Overhead Variance

Actual fixed overhead$-$(SHP$\times$FOAR)

$=$Rs. 33,000$-$(950$\times$Rs. 30)
$=$Rs. 33,000$-$Rs. 28,500$=$Rs. 4,500 (A)

Fixed Overhead Expenditure Variance

AFO$-$BFO
$=$Rs. 33,000$-$Rs. 30,000$=$Rs. 3,000 (A)

Fixed Overhead Volume Variance$=$

(SHP$-$Budgeted hours)$\times$FOAR
(950$-$1,000)$\times$Rs. 30
$=$1,500 (A)

Check

Fixed overhead variance $=$ Fixed overhead expenditure variance $+$ Fixed overhead volume variance

Rs. 4,500 (A)$=$Rs. 3,000 (A)$+$1,500 (A).

Analysis of Volume Variance

Volume variance is sum of efficiency variance and capacity variance. That is to say, volume variance can be analysed into efficiency variance and capacity variance. The first variance arises due to labour being more or less efficient than planned. The second variance arises due to working more or less hours worked than the planned hours.

Volume Efficiency Variance

Efficiency variance is favourable if workers are more efficient than the standard envisaged. In the reverse case the variance is adverse. As in the case of labour efficiency variance, volume efficiency variance is basd on the difference between the standard hours of production and the actual hours worked.

The formula is :

Volume efficiency variance$=$(Clock hours$-$SHP)$\times$FOAR

Capacity Variance

Capacity variance arises as already indicated when the actual capacity differs from planned or budgeted capacity.

The formula is:

Capacity Variance$=$(Clock hours$-$Bugeted hours) $\times$ FOAR

Illustration 14

Taking the data of Illustration 13, compute (*a*) Volume efficiency and (*b*) capacity variances.

Solution

Volume efficiency variance = (Clock hours − SHP) × FOAR
= (900 − 950) × Rs. 30
= 1500 (*F*)

Capacity variance = (Clock hours − Budgeted hours) × FOAR
(900 − 1000) × Rs. 30
Rs. 3,000 (*A*)

Check

Volume variance = Efficiency variance + Capacity variance.
1500 (*A*) = 1500 (*F*) + 3000 (*A*).

Analysis of Capacity Variance

Capacity variance can be further analysed into calendar variance and capacity usage variance. The first variance arises due to the effect of calendar and the second one arises due to over or under-utilisation of plant capacity.

Calendar Variance

Calendar variance arises because of the unevenness in number of working days for different months. In a particular month with more public holidays the capacity is affected due to calendar variance. These variations are calculated with reference to a standard month. Standard month is an average concept and it is arrived at by dividing the number of working days in a year by twelve. Since over a year the days lost and gained must cancel out the calendar variance will be nil.

Calendar variance :

$$\left(\begin{array}{l}\text{Working days}\\ \text{in actual}\\ \text{month}\end{array} - \begin{array}{l}\text{Working days}\\ \text{in a standard}\\ \text{month}\end{array}\right) \times \begin{array}{l}\text{Total number}\\ \text{of working}\\ \text{hours per day}\end{array} \times \text{FOAR}$$

Capacity Usage Variance

After considering the calendar variance the residuary of the capacity variance is termed as capacity usage variance. However, in many books it is referred to as capacity variance. So under such procedure capacity and calendar variance are calculated instead of calculating capacity variance and then analysing it into calendar and capacity usage variances.

Capacity usage variance = (Actual hours worked − Hours planned for actual month) × FOAR.

The analysis of capacity variance into calendar and capacity usage variance is worked out in Illustration 16.

Causes of Overhead Variances

Expenditure Variance. This arises due to price changes for services like gas, electricity and materials like oil, grease, lubricants, etc. Expenditure variance can also arise due to over or underutilisation of service which forms part of overheads.

Efficiency Variance. As already indicated, this arises in conjunction with labour efficiency variance.

Capacity Variance. This arises due to calendar variance, strikes and lockouts, non-availability of labour, power cuts, machine breakdowns and lack of demand for the product.

Illustration 15. In department 'OM' the following data are submitted for the week ended Feb. 20.

Standard output for 40 hours week	14,000 units
Standard fixed overheads	Rs. 1,400
Actual output	12,000 units
Actual hours worked	32
Actual fixed overheads	Rs. 1,500

Compute the fixed overhead variances.

Solution

Workings : Fixed Overhead Absorption Rate

$$=\frac{\text{Rs. } 1{,}400}{14{,}000}=0{\cdot}1 \text{ Re.}$$

Fixed overhead absorbed

$$=12{,}000\times 0{\cdot}1 \text{ Re.}=\text{Rs. } 1{,}200$$

Units to be produced for the clock hours at standard rate

$$=\frac{14{,}000\times 32}{40}=11{,}200 \text{ units.}$$

Fixed Overhead Variance

Fixed Overhead Cost variance = Overhead absorbed − Actual overheads

= Rs. 1,200 − Rs. 1,500 = Rs. 300 (*A*)

Expenditure variance = Budgeted overheads − Actual overheads

= Rs. 1,400 − Rs. 1,500 = Rs. 100 (*A*)

Volume variance = (Actual units − Budgeted units) × FOAR

= (12,000 − Rs. 14,000) × Re. 0·1 = Rs. 200 (*A*)

Check :

$$\text{Overhead Cost variance}=\text{Expenditure variance}+\text{Volume variance}$$

$$\text{Rs. } 300(A)=\text{Rs. } 100\ (A)+\text{Rs. } 200\ (A)$$

$$\text{Volume efficiency variance}=\left(\text{Actual units}-\text{Budgeted units for actual time}\right)\times\text{FOAR}$$

$$=(12{,}000-11{,}200)\times\text{Rs. } 0{\cdot}1=\text{Re. } 80\ (F)$$

$$\text{Volume capacity variance}=\left(\text{Budgeted units for actual time}-\text{Budgeted units}\right)\times\text{FOAR}$$

$$=(11{,}200-14{,}000)\times\text{Re. } 0{\cdot}1=\text{Rs. } 280\ (A)$$

$$\text{Volume variance}=\text{Volume capacity variance}+\text{Volume efficiency variance}$$

$$\text{Rs. } 200\ (A)=\text{Rs. } 280\ (A)+\text{Rs. } 80\ (F)$$

Illustration 16. Vinak Ltd. has furnished you the following information for the month of August 1979.

	Budget	Actual
Output (units)	30,000	32,500
Hours	30,000	33,000
Fixed overhead	Rs. 45,000	Rs. 50,000
Variable overhead	Rs. 60,000	Rs. 68,000
Working days	25	26

Compute the Overhead Variances.

Solution

Variable Overhead Variance

Variable overhead absorption rate (VOAR) $= \dfrac{\text{Budgeted variable overheads}}{\text{Budgeted standard hours of production}}$

$= \dfrac{\text{Rs. } 60{,}000}{30{,}000} = \text{Rs. } 2 \text{ per hour}$

Variable overheads absorbted = Standard hours of actual production × VOAR
= 32,500 × Rs. 2 = Rs.65,000

Actual variable overheads. = Rs.68,000

Total variable overhead variance = Variable overheads absorbed —Actual variable overheads

= Rs. 65,000 − Rs. 68,000 = Rs. 3,000 (*A*)

Variable Overhead Expenditure Variance

This is the difference between Allowed variable overheads and Actual variable overheads.

Allowed variable overheads $= \dfrac{\text{Rs.}60{,}000}{30{,}000} \times 33{,}000 = 66{,}000$

∴ Expenditure variance = Rs. 66,000 − Rs. 68,000 = Rs. 2,000 (*A*)

Variable Overhead Efficiency Variance

This is the difference between Allowed variable overheads and absorbed variable overheads.

∴ (32,500 − 33,000) × Rs. 2 = 1,000 (*A*)

Check :

Total variable overhead variance	=	Variable O.H. Expenditure variance	+	Variable O.H Efficiency variance
Rs. 3,000 (*A*)	=	Rs. 2,000 (*A*)	+	Rs. 1,000 (*A*)

Fixed Overhead Variance

Total Fixed overhead variance = Actual Fixed C −(SHP × FOAR)

$$\text{FOAR} = \frac{\text{Rs. } 45{,}000}{30{,}000} = \text{Rs. } 1\cdot5 \text{ per hour.}$$

$$\therefore \text{ Fixed overhead variance} = \text{Rs. } 50{,}000 - (\text{Rs. } 1\cdot5 \times 32{,}500)$$
$$= \text{Rs. } 1{,}250\ (A)$$

Overhead Expenditure Variance

$$= \text{Actual fixed overheads} - \text{Budgeted fixed overheads}$$
$$= \text{Rs. } 50{,}000 - \text{Rs. } 45{,}000 = \text{Rs. } 5{,}000\ (A)$$

Overhead Volume Variance

$$= (\text{SHP} - \text{Budgeted hours}) \times \text{FOAR}$$
$$= (32{,}500 - 30{,}000) \times \text{Rs. } 1\cdot50 = \text{Rs. } 3{,}750\ (F)$$

Check :

Total fixed overhead variance	=	Fixed overhead expenditure variance	+	Fixed Overhead volume variance
Rs. 1,250 (A)	=	Rs. 5,000 (A)	+	Rs. 3,750 (F)

Volume Efficiency Variance

$$(\text{Hours worked} - \text{SHP}) \times \text{FOAR}$$
$$(33{,}000 - 32{,}500) \times \text{Rs. } 1\cdot50 = \text{Rs. } 750\ (A)$$

Volume Capacity Variance

$$(\text{Hours worked} - \text{Budgeted hours}) \times \text{FOAR}$$
$$(33{,}000 - 30{,}000 \times \text{Rs. } 1\cdot50 = \text{Rs. } 4{,}500\ (F)$$

Check :

Fixed Overhead volume variance	=	Fixed overhead efficiency variance	+	Fixed Overhead capacity variance
Rs. 3, 750 (F)	=	Rs. 750 (A)	+	Rs. 4,500 (F)

Calender Variance

$$\left(\begin{array}{c}\text{Working days in} \\ \text{actual month}\end{array} - \begin{array}{c}\text{Standard} \\ \text{month}\end{array}\right) \times \begin{array}{c}\text{Total no. of} \\ \text{working hours} \\ \text{per day}\end{array} \times \text{FOAR}$$

Total No. of working hours per day

$$= \frac{\text{Budgeted hours for an average month}}{\text{Budgeted number of days}}$$

$$= \frac{30{,}000}{25} = 1{,}200 \text{ hours per day}$$

Calender Variance

$$= (26 - 25) \times 1{,}200 \times \text{Rs. } 1\cdot50 = \text{Rs. } 1{,}800\ (F)$$

Capacity Usage Variance

$$\left[\begin{array}{c}\text{Actual hours} \\ \text{worked}\end{array} - \begin{array}{c}\text{Hours planned} \\ \text{for actual month}\end{array}\right] \times \text{FOAR}$$

$$\text{Hours planned for actual month} = \frac{30{,}000}{25} \times 26 = 31{,}800 \text{ hours.}$$

Capacity Usage Variance

$\therefore$ (33,000 − 31,800) × Rs. 1·50 = 2,700 (*F*)

Check :

Overhead capacity variance	=	Overhead Calendar variance	+	Overhead capacity usage. variance
Rs. 4,500 (*F*)	=	Rs. 1,800 (*F*)	+	Rs. 2,700 (*F*)

VARIANCES FOR FIXED AND VARIABLE EXPENSES TAKEN AT A TIME

If the effect of total overhead expenses, variable and fixed, is to be examined by the management, normally three variances are calculated.

Volume Variance

This the difference between the absorbed overhead expenses at a certain level of production and budgeted expenses at the same level of production

Absorbed overhead expenses are determined with the help of budgeted production and budgeted overheads, both fixed and variable. For example, if a budgeted production for a period is 2,000 units and fixed overhead is Rs. 2,000 and variable overhead is Rs 0 50 per unit, the total overheads at 2,000 units will be Rs. 2,000+Rs 1,000, *i.e.*, Rs. 3,000, and rate of absorption of fixed overheads will be :

$$\frac{3,000}{2,000} = \text{Rs } 1\ 50 \text{ per unit}$$

If in the period production is achieved at 1,800 units, the Volume Variance may be calculated as under—

At 1,800 units budgeted overhead is
= Rs 2,000 + Rs 900 = Rs 2,900

At 1,800 units absorbed overhead is
= Rs 1,800 × Rs 1 50 = Rs 2,700

Volume Variance (*adverse*) Rs 200

Spending Variance or Expenditure Variance or Budget Variance

Spending variance is the difference between the budgeted overhead at a certain level of production and the amount actually spent. If at the production Rs 2,800 overhead expenses are incurred, the Spending Variance is—

Spending Variance—Budgeted Overhead - Actual Overhead
= Rs. 2,900 − Rs. 2,800 = Rs. 100 (F)

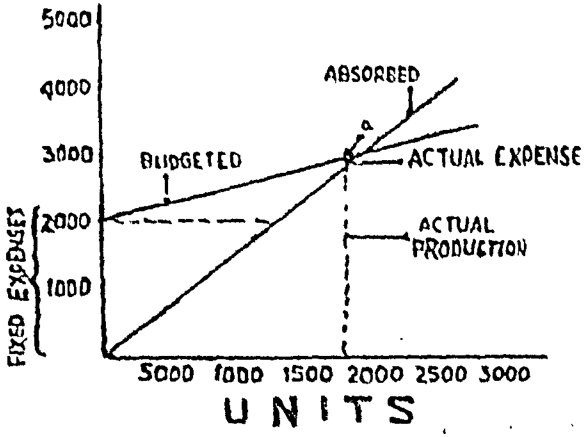
Since, the actual amount is less than authorised as per budgeted, it is favourable.

Net Variance

It is the algebraic *sum* of the above two variances. In the above example—

Net Variance = Volume Variance + Spending Variance
= Rs. 200 (A) + Rs. 100 (F) = Rs. 100 (A).

These variance can be plotted on the graph shown below.



Graph Showing Overhead Variances.

SALES VARIANCES

Total sales are influenced by two factors, namely, the quantity sold and the price at which the product is sold. Any analysis of sales variances must take into account both the factors. There are again two approaches to the calculation of variances. The first apyroach is known as the turnover method and tries to analyse the difference between planned sales and actual sales. The calculation of these variances is similar to the calculation of material variances except for differences in nomenclature. However, this approach is of no use to management as it does not explain the profit variation. It is with a view to explain the contribution of sales factors to the variations in operating profit from planned profit, another approach, known as margin approach or 'profit method' of analysing sales variances has been developed. The turnover method although serves no purpose has been explained, purely for academic purpose.

Turnover Method

It is desirable to understand the following terms before proceeding to know the computation of the variances.

Budgeted sales	=	Budgeted quantity × Standard sale price
Actual sales	=	Actual quantity × Actual sale price
Standard sales	=	Actual Quantity × Standard sale price.

$$\text{Revised Standard Quantity} = \frac{\text{Total Quantity of actual mix}}{\text{Total Quantity of budgeted mix}} \times \text{Budgeted quantity}$$

$$\text{Revised Standard Sales} = \text{Revised Standard Quantity} \times \text{Standard Sale Price}$$

Value variance. This is the difference between budgeted and actual sales and represents the total variance in relation to sales. It is calculated by the following formula :

Budgeted quantity × Standard sale price − Actual quantity × Actual sale price.

Actual sales differ from budgeted sales due to changes in prices and volume. Therefore value variance is further analysed into Price and Volume variances.

Price variance : This is analogous to material price variance and is computed by the formula :

$$\text{Price variance} = \text{Actual Quantity sold} \times \left(\begin{array}{c}\text{Standard Price}\\ -\text{Actual Price}\end{array}\right)$$

or $\qquad$ = Standard sales − Actual sales

Volume variance : This is similar to material usage variance and is calculated by the formula

$$\text{Volume Variance} = \text{Standard sale price} \times \left(\begin{array}{c}\text{Budgeted quantity}\\ -\text{Actual quantity}\end{array}\right)$$

Alternatively, it is equal to Budgeted sales − Standard sales. Volume variance can arise due to two factors : namely, actual mix being different from the standard mix and variations of quantities sold from the budgeted figures. The variance attributable to the first factor is called mix variance and the variance arising due to variations in quantities is called quantity variance.

Mix Variance : This arises only when more than one product is [illegible] Mix variance [illegible] in the mix of [illegible] mogeneous [illegible] d on quantity. [illegible] detergents and perfumes, mix variance must be based taking into account the mix of values.

(*i*) *When Products are Homogeneous* : In this case mix variance is calculated by the formula

$$\text{Mix Variance} = \text{Standard Price} \times \left(\begin{array}{c}\text{Revised Standard quantity}\\ -\text{Actual quantity}\end{array}\right)$$

Alternatively, Revised standard sales − S [illegible]
mix variance. Revised standard quantity is [illegible]

$$\text{Revised standard quantity} = \frac{\text{Standard quantity}}{\text{Total quantity of standard mix}} \times \text{Total quantity of actual mix}$$

If actual quantity is more than the revised standard quantity, the variance is favourable and *vice versa.*

(*ii*) *When products are heterogeneous* : In ; case the procedure followed is different. The budgeted sales of each product is calculated as a ratio of the Total budgeted sales. Then revised standard sales is calcu-e d for each product by applying the formula

$$\text{Revised standard sales} = \text{Budgeted ratio of sales} \times \text{Standard sales}$$

Mix variance is the difference between the revised standard sales and standard sales. Expressed as a formula

Mix Variance = Revised Standard Sales − Standard Sales

If the standard sales are more than revised standard sales the variance is favourable and *vice versa*. Under this method mix variance arises only for individual products. Where all the products are taken together mix variance will be nil. This is because the revised standard sales and standard sales for all the products is the same. Revised standard sales is only an allocation of standard sales in the budgeted ratio. So under this method the entire volume variance is accounted for by quantity variance.

Quantity Variance : It is represented by the difference between budgeted sales and revised standard sales. If the revised standard sales is more than the budgeted sales the variance is favourable and *vice versa.* The variance is expressed by the formula

$$\text{Quantity Variance} = \text{Budgeted sales} - \text{Revised standard sales}$$

Margin Method

Here again the understanding of certain terms will facilitate the computation of the variances.

(*i*) Margin = Sale price − Standard cost.

Budgeted margin is calculated by subtracting standard cost from the budgeted sale price. Likewise, actual margin is calculated by subtracting the standard cost from actual sale price. Remember it is the standard cost and not the actual cost that should be subtracted to ascertain actual margin. The actual cost is relevant only in the context of cost variances and not for ascertaining the sales variances.

(*ii*) $\text{Budgeted Profit} = \text{Budgeted Quantity} \times \text{Budgeted Margin}$

(*iii*) $\text{Actual Profit} = \text{Actual Quantity} \times \text{Actual Margin}$

(*iv*) $\text{Standard Profit} = \text{Actual Quantity} \times \text{Budgeted Margin}$

Value Variance : It is the difference between budgeted profit and actual profit. Expressed by formula

$$\text{Value Variance} = \text{Budgeted Profit} - \text{Actual Profit}$$

Price Variance : There is no difference between price variance calculated under the turnover method and under this method. Expressed by the formula

$$\text{Price Variance} = \text{Actual Quantity} \times \left(\text{Budgeted Margin} - \text{Actual Margin} \right)$$

$$\text{Allternatively Price Variance} = \text{Standard Profit} - \text{Actual Profit}$$

Volume Variance : It is the difference between budgeted profit and standard profit. The variance is favourable if the standard profit is more than the budgeted profit and *vice versa*. It can also be calculated by the formula

$$\text{Volume Variance} = \text{Budgeted Margin} \times \left(\text{Budgeted Quantity} - \text{Actual Quantity} \right)$$

If the actual quantity is more than the budgeted quantity the variance is favourable and *vice versa*.

As pointed out earlier volume variance can be analysed into mix and quantity variances. Volume variance is thus the sum of mix and quantity variances.

Mix Variance : It is the difference between the revised standard profit and the standard profit. If the standard profit is more than the revised standard profit the variance is favourable and *vice versa*. Mix variance can also be calculated by the formula

$$\text{Mix Variance} = \text{Budgeted Margin} \times \left(\text{Revised Standard Quantity} - \text{Actual Quantity} \right)$$

Where the products are heterogeneous the mix variance is calculated by taking the difference between revised standard profit and standard profit. Revised standard profit is calculated by multiplying the revised standard sales* with standard rate of profit.

$$\text{Standard rate of profit} = \frac{\text{Standard profit per unit}}{\text{Standard price per unit}}$$

Q[illegible] It is the difference between budgeted profit and revised [illegible] The variance is : [illegible] budgeted profit and *vice versa*. In the case of homogeneous products it can also be calculated by the formula

$$\text{Quantity Variance} = \text{Budgeted Margin} \times \left(\text{Budgeted quantity} - \text{Revised Standard Quantity} \right)$$

[illegible] is more than the budgeted quantity [illegible] *sa*.

[illegible] a given below calculate sales variances both by the turnover method and the margin method.

Budgeted Sales

A 50,000 units at Rs. 10 (Standard margin Rs. 4)
B 30,000 units at Rs. 5 (Standard margin Rs. 2)
C 20,000 units at Rs. 3 (Standard margin Re. 1)

*See Mix Variance—when products are heterogeneous—Page 322.

Actual Sales

A 40,000 units at Rs. 4,50,000
B 50,000 units at Rs. 2,40,000
C 30,000 units at Rs. 1,05,000

Solution :

I. Turnover Method.

(*i*) Value Variance=Budgeted Sales—Actual Sales.

=*A* 50,000×Rs. 10—Rs. 4,50,000=Rs. 50,000 (*A*)
=*B* 30,000×Rs. 5—Rs. 2,40,000=Rs. 90,000 (*F*)
=*C* 20,000×Rs. 3—Rs. 1,05,000=Rs. 45,000 (*F*)

Total Rs. 85,000 (*F*)

(*ii*) Price Variance=Actual Quantity Sold×(Standard Price —Actual Price)

=*A* 40,000×Rs. 10—Rs. 4,50,000=Rs. 50,000 (*F*)
=*B* 50,000×Rs. 5—Rs. 2,40,000=Rs. 10,000 (*A*)
=*C* 30,000×Rs. 3—Rs. 1,05,000=Rs 15,000 (*F*)

Total =Rs. 55,000 (*F*)

(*iii*) Volume Variance=Standard Price×(Budgeted quantity —Actual quantity)

=Budgeted Sales—Standard Sales.

=*A* Rs. 10 (50,000—40,000)=Rs. 1,00,000 (*A*)
=*B* Rs. 5 (30,000—50,000)=Rs. 1,00,000 (*F*)
=*C* Rs. 3 (20,000—30,000)=Rs. 30,000 (*F*)

Total =Rs. 30,000 (*F*)

Check I :

Value Variance=Price Variance+Volume Variance.
Rs. 85,000 (*F*)=Rs. 55,000 (*F*)+Rs. 30,000 (*F*).

(*iv*) Mix Variance*=Standard Price×(Revised Standard quantity —Actual quantity)

Revised Standard quantities are calculated below :

$$A=\frac{1,20,000}{1,00,000}\times 50,000 \qquad =60,000 \text{ units}$$

*As stated in theory there are two ways of calculating mix variance. In this illustration the variance is calculated on the assumption that the products are homogeneous. The student is advised to work out mix variance on the assumption that the products are heterogeneous both under the turnover method and the margin method.

$$B=\frac{1,20,000}{1,00,000}\times 30,000 \qquad =36,000 \text{ units}$$

$$C=\frac{1,20,000}{1,00,000}\times 20,000 \qquad =24,000 \text{ units}$$

Total $=1,20,000$ units

$=A$ Rs. 10 (60,000−40,000) = Rs. 2,00,000 (A).
$=B$ Rs. 5 (36,000−50,000) = Rs. 70,000 (F)
$=C$ Rs. 3 (24,000−30,000) = Rs. 18,000 (F)

= Rs. 1,12,000 (A)

(v) Quantity variance = Standard Price × (Budgeted quantity − Revised Standard quantity)

$=A$ Rs. 10 (50,000−60,000) = Rs 1,00,000 (F)
$=B$ Rs. 5 (30,000−36,000) = Rs. 30,000 (F)
$=C$ Rs. 3 (20,000−24,000) = Rs. 12,000 (F)

Total = Rs. 1,42,000 (F)

Check II

Volume Variance = Mix Variance + Quantity Variance.
Rs. 30,000 (F) = Rs. 1,12,000 (A) + Rs. 1,42,000 (F).

II. Margin Method :

(i) Value Variance or Total Sales Margin Variance } = Budgeted Profit − Actual Profit.
= (Actual sales − Standard cost of Sales) − Budgeted Profit.
$=A$ (Rs. 4,50,000 − Rs. 2,40,000) − Rs. 2,00,000 = Rs. 10,000 (F)
$=B$ (Rs. 2,40,000 − Rs. 1,50,000) − Rs 60,000 = Rs. 30,000 (F)
$=C$ (Rs. 1,05,000 − Rs. 60,000) − Rs 20,000 = Rs 25,000 (F)

Total = Rs. 65,000 (F)

(ii) Sales Margin Price Variance } = Actual Quantity Sold × (Budgeted Margin − Actual Margin)

$=A$ 40,000 (Rs. 4 − Rs. 5·25) = Rs. 50,000 (F)
$=B$ 50,000 (Rs. 2 − Rs. 1·80) = Rs. 10,000 (A)
$=C$ 30,000 (Rs. 1 − Rs. 1·50) = Rs. 15,000 (F)

Total = Rs. 55

Alternatively,

Actual Sales−(Actual Units sold × Standard Selling price)

$=A$ Rs. 4,50,000−(40,000 × Rs. 10) = Rs. 50,000 (*F*)
$=B$ Rs. 2,40,000−(50,000 × Rs. 5) = Rs. 10,000 (*A*)
$=C$ Rs. 1,05,000−(30,000 × Rs. 3) = Rs. 15,000 (*F*)

Total = Rs. 55,000 (*F*)

(*iii*) Sales Margin Volume Variance = Budgeted Margin × (Budgeted quantity −Actual quantity).

$=A$ Rs. 4 (50,000−40,000) = Rs. 40,000 (*A*)
$=B$ Rs. 2 (30,000−50,000) = Rs. 40,000 (*F*)
$=C$ Re. 1 (20,000−30,000) = Rs. 10,000 (*F*)

Total = Rs. 10,000 (*F*)

Check I :

Value Variance = Price Variance + Volume Variance.

Rs. 65,000 (*F*) = Rs. 55,000 (*F*) + Rs. 10,000 (*F*)

(*iv*) Mix Variance = Budgeted Margin × (Revised standard quantity−Actual quantity)

$=A$ Rs. 4 (60,000−40,000) = Rs. 80,000 (*A*)
$=B$ Rs. 2 (36,000−50,000) = Rs. 28,000 (*F*)
$=C$ Re. 1 (24,000−30,000) = Rs. 6,000 (*F*)

Total = Rs. 46,000 (*A*)

(*v*) Quantity Variance = Budgeted Margin × (Budged quantity −Revised standard quantity)

$=A$ Rs. 4 (50,000−60,000) = Rs. 40,000 (*F*)
$=B$ Rs. 2 (30,000−36,000) = Rs. 12,000 (*F*)
$=C$ Re. 1 (20,000−24,000) = Rs. 4,000 (*F*)

Total = Rs. 56,000 (*F*)

Check II :

Volume Variance = Mix Variance + Quantity Variance.

Rs. 10,000 (*F*) = Rs. 46,000 (*A*) + Rs. 56,000 (*F*).

Check III :

Value Variance = Price Variance + Mix Variance + Quantity Variance.

Rs. 65,000 (*F*) = Rs. 55,000 (*F*) + Rs. 46,000 (*A*) + Rs. 56,000 (*F*)

Comprehensive Illustration

So far there has been a discussion of cost variances and sales variances separately. However, what management is interested in is in the [illegible] geted [illegible] nces. [illegible]

Illustration 18. A company producing a single product anticipated certain amount of profit on an expected production and sale of 80,000 units, but found on actual working that the profits turned out to be much below expectation. From the following particulars, you are required to draw up a reconciliation between the company's actual and budgeted profits explaining the variations due to various causes. You are also required to determine, in particular, the material price variance, wage rate variance and sales price and volume variance.

	Anticipated	*Actual*
Units	80,000	70,000
Net selling price per unit	Rs. 40	Rs. 42
Material per unit	Kg. 4	Kg. 4
Rate of Material per kg	Rs. 4	Rs. 4·50
Labour hours per unit	Hours 5	Hours 4·50
Rate per labour hour	Re. 1	Rs. 1·20
Variable overheads per labour hour	Rs 1·60	Rs. 2·00
Fixed overhead per unit	Rs. 2·00	Rs. 2·40

[*I.C.W.A.* (*Inter*) *June 1981*]

Solution.

STATEMENT SHOWING THE RECONCILIATION BETWEEN BUDGETED AND ACTUAL PROFITS

Standard sales		Rs.
80,000 units at a budgeted price of Rs. 40 per unit		32,00,000
Less : Standard cost of sales 80,000 units @ Rs. 31 per unit		24,80,000
Budgeted Profit		7,20,000
Add : Favourable variances		
	Rs.	
Sales Price Variance	1,40,000	
Labour Efficiency Variance	35,000	
Variable Overhead Efficiency Variance	*56,000*	2,31,000

Less : Unfavourable Variances

	Rs.	
Sales Volume Variance	90,000	
Material Rate Variance	1,40,000	
Labour Rate Variance	63,000	
Variable Overhead Expenditure Variance	1,26,000	
Fixed Overhead Expenditure Variance	8,000	
Fixed Overhead Volume Variance	20,000	4,47,000
Actual Profit		5,04,000

Tutorial Note

(1) Statement of Actual Profit :

Actual sales, 70,000 units @ Rs. 42 per unit		29,40,000
Less : Manufacturing cost :		
Material	70,000 × 4 × Rs. 4·50 = 12,60,000	
Labour	70,000 × 4·5 × Rs. 1·20 = 3,78,000	
Variable Overheads	70,000 × 4·5 × Rs. 2·00 = 6,30,000	
Fixed Overheads	70,000 × Rs. 2·40 = 1,68,000	24,36,000
Actual Profit		5,04,000

(2) Standard cost-per unit

Material	4 × 4 Rs.	= 16
Labour	5 × 1 Rs.	= 5
Variable overheads	5 × 1·60 Rs.	= 8
Fixed overheads		= 2
		31

(3) Variances

(*i*) Material Rate Variance
2,80,000 (Rs. 4 − Rs. 4·50) = Rs. 1,40,000 (*A*)

(*ii*) Labour Rate Variance
3,15,000 (Rs. 1 − Rs. 1·20) = Rs. 63,000 (*A*)

(*iii*) Labour Efficiency Variance
Re. 1 (3,50,000 − 3,15,000) = Rs. 35,000 (*F*)

(*iv*) Variable Overheads Expenditure Variance
Rs. 6,30,000 − (3,15,000 × Rs. 1·60) = Rs. 1,26,000 (*A*)

(*v*) Variable Overheads Efficiency Variance
Rs. 1·6 (3,15,000 − 3,50,000) = Rs. 56,000 (*F*)

(*vi*) Fixed Overheads Expenditure Variance
70,000 × 2·40 − Rs. 80,000 × 2 Rs. = Rs. 8,000 (*A*)

(*vii*) Fixed Overhead Volume Variance

Rs. 2×(80,000−70,000)=Rs. 20,000 (*A*)

(*viii*) Sales Price Variance

70,000 (Rs. 40−Rs. 42)=Rs. 1,40,000 (*F*)

(*ix*) Sales Volume Variance

Rs. 9 (7,000−80,000)=Rs. 90,000 (*A*)

PROBLEMS ASSIGNMENT MATERIAL

Material Variances

1. Given that the cost standards for materials consumption are 40 kg. at Rs. 10 per kg., compute the variances when actuals are :

(*a*) 8 kg. at Rs. 10 per kg.
(*b*) 10 kg. at Rs. 12 per kg.
(*c*) 48 kg. at Rs. 12 per kg.
(*d*) 36 kg. for a total cost of Rs. 360.

(*C.A. Inter 1974*)

[illegible] ance Rs. 80 (*A*) ; (c) [illegible] variance Rs. 80 (*A*)

2. From the data given below compute material variances.

Standard

Material for 80 kg finished product, 100 kg (to be used)	
Price per kg.	Rs 0·80

Actual

Production	1,65,000 kg.
Material used	2,00,000 kg.
Actual cost	Rs. 1,70,000

[**Ans.** Material cost variance Rs. 5,000 (*A*) ; Material Price variance Rs. 10,000 (*A*) ; Material usage variance Rs. 5000 (*F*)]

3. From the following particulars you are required to compute material mix variance.

Standard Mix	Actual Mix
X 60 tons at Rs. 3	50 tons at Rs. 3
Y 40 tons at Rs. 6	35 tons at Rs. 6

[**Ans.** Rs. 3 (*A*)]

4. From the following you are required to calculate—

(*a*) Material Price variance, (*b*) Material usage variance and (*c*) Material cost variance.

Quantity of Material Purchased	3,000 units
Value of Material Purchased	Rs. 9,000
Standard Quantity of materials required per tonne of finished product	25 units
Standard rate of material	Rs. 2 per unit

Opening stock of material	Nil
Closing stock of material	500 units
Finished production during the period	800 tonnes

(*I.C.W.A. Inter*)

[Ans. Material Cost Variance Rs. 3,500 (*A*)
Material Price Variance Rs. 2,500 (*A*)
Material Usage Variance Rs. 1,000 (*A*)]

5. From the data given below you are required to compute material variances.

Standard Mix	Actual Mix
Material *A* 40% at Rs. 200 per tonne	180 tonnes at Rs. 190
Material *B* 60% at Rs. 300 per tonne	220 tonnes at Rs. 340

During the month actual production was measured at 342 tonnes. Standard loss of production expected is 10 per cent.

[Ans. Material Cost Variance= 10,200 (*A*)
Material Price Variance= 7,000 (*A*)
Material Usage Variance= 3,200 (*A*)
Material Mix Variance= 2,000 (*F*)
Material Yield Variance= 5,200 (*A*)]

6. From the data given below compute material variances.

Standard Mix

Material *A*	600 kg	Price Rs. 0·90 per kg
Material *B*	400 ,,	Price Rs. 0·65 ,, ,,
Material *C*	500 ,,	Price Rs. 0·40 ,, ,,

Each standard mix results in a production of 80,000 tiles. During a period 8 mixes were processed and actual materials consumed were :

Material *A*	5,000 kg @ Rs. 0·85 per kg
Material *B*	2,900 kg @ Rs. 0·60 per kg
Material *C*	4,400 kg @ Rs. 0·45 per kg.

[*C.A. (Final) Nov. 1976*]

[Ans. Material cost variance Rs. 220 (*A*)
Material usage variance Rs. 395 (*A*)
Material Price variance Rs. 175 (*F*)
Material mix variance Rs. 55 (*F*)
Material yield variance Rs. 450 (*A*)]

7. From the following data for May 1981 of a factory, calculate (*a*) material cost variance (*b*) material price variance (*c*) material usage variance (*d*) material mixture variance and (*e*) material yield variance.

Name of Material	*Standard*		*Actual*	
	Kg	*Rate* Rs.	*Kg*	*Rate* Rs.
X	8,000	1·05	7,500	1·20
Y	3,000	2·15	3,300	2·30
Z	2,000	3·30	2,400	3·50

Also write a short note on the relationship among these different variances. *[I.C.W.A. (Inter) December 1981]*

[**Ans.** Material cost variance Rs. 3,540 *(A)*;
Material price variance Rs. 2,100 *(A)*;
Material usage variance Rs. 1,440 *(A)*;
Material mix variance Rs. 1,109·65 *(A)*;
Material yield variance Rs. 330·35 *(A)*].

Material yield variance in this case is the same as material sub-usage or revised usage variance. In calculating the revised standard quantities fractional values have been rounded off to the nearest number.

Labour Variances

8. From the following data given below, calculate each of the three wages variances for the two departments.

		Dept. A	*Dept. B*
Actual gross wages (direct)	Rs.	2,000	Rs. 1,800
Standard hours produced		8,000	6,000
Standard rate per hour		30 paise	35 paise
Actual hours worked		8,200	5,800

(*I.C.W.A. Inter*)

[**Ans :**	*Dept. A (Rs.)*	*Dept. B (Rs.)*
Cost variance	400 *(F)*	300 *(F)*
Rate variance	460 *(F)*	230 *(F)*
Efficiency variance	60 *(A)*	70 *(F)*].

9. The details regarding the composition and the weekly wage rates of labour force engaged on job scheduled to be completed in 30 weeks are as fo'lows :

Category of workers	*Standard*		*Actual*	
	No of labourers	*Weekly wage rate per labourer*	*No. of labourers Rs*	*kly wage rate r labourer Rs.*
Skilled	75	60	70	70
Semi-skilled	45	40	30	50
Urskilled	60	30	80	20

The work was actually completed in 32 weeks. Calculate the various labour variances. *(B. Com. Delhi)*

[**Ans :**	Rs.
Labour Cost Variance	13,000 *(A)*
Labour Rate Variance	6,400 *(A)*
Labour Efficiency Variance	6,600 *(A)*
Labour Mix Variance	9,600 *(F)*
Revised Labour Efficiency Variance	16,200 *(A)*

10. Find the variances where the cost standards are 100 hours and 40 paise per hour and the actuals are :

(*a*) 110 hours at 35 paise per hour.
(*b*) 95 hours for a cost of Rs. 36·74.

[**Ans** :

	(*a*)	(*b*)
Wages Variance	Rs. 1·50 (*F*)	Rs. 3·26 (*F*)
Labour Efficiency Variance	Rs. 4·00 (*A*)	Rs. 2 (*F*)
Wages Rate Variance	Rs. 5·50 (*F*)	Rs. 1·26 (*F*)]

11. Compute the labour variances from the following information :

Budgeted labour force for manufacturing product *X*

10 men @ 60 paise per hour for 50 hours
15 women @ 40 paise per hour for 40 hours.

Actual labour force employed for product *X*

15 men @ 65 paise per hour for 40 hours
20 women @ 45 paise per hour for 25 hours.

[**Ans** :

Labour Cost Variance	Rs. 75 (*A*)
Labour Rate Variance	Rs. 55 (*A*)
Labour Efficiency Variance	Rs. 20 (*A*)]

12. A contract job is scheduled to be completed in 30 weeks with a labour complement of 100 skilled operatives, 40 semi-skilled operatives and 60 unskilled operatives. The standard weekly wages of each type of operative are—skilled Rs. 60, semi-skilled Rs. 36 and unskilled Rs. 24. The work is actually completed in 32 weeks with a labour force of 80 skilled, 50 semi-skilled and 70 unskilled operatives and actual weekly wage rate averaged Rs. 65 for skilled, Rs. 40 for semi-skilled and Rs. 20 for unskilled labour. Analyse the variances in labour cost due to various reasous. (*I.C.W.A. Inter, India*)

[**Ans.**

Labour cost variance	Rs. 8,800 (*A*)
Labour rate variance	Rs. 10,240 (*A*)
Labour Efficiency variance	Rs. 1,440 (*F*)
Labour Mix variance	Rs. 19,200 (*F*)]

Overhead Variances

13. From the data below prepare a tabulation to include overhead variances analysed into efficiency, volume, capacity and expenditure.

Standard details	Department *X*	Department *Y*
Hours, when working at normal capacity	4,000	2,000
Overhead hourly rate	Re. 0·50	Rs. 2
Allowed hours for actual production	4,000	1,600
Actual details—Hours	4,150	1,550
Overhead	Rs. 2,020	Rs. 3,750

(*Adapted I.C.W.A. Inter Dec. 1980*)

	X	Y
[Ans. Total O.H. variance	20 (A)	550 (A)
Expenditure variance	20 (A)	250 (F)
Volume variance	Nil	800 (A)
Efficiency variance	75 (A)	100 (F)
Capacity variance	75 (F)	900] (A)

14. A company manufacturing two products operates a standard costing system.

Product *A* Rs. 2·40 (8 direct labour hours @ Re. 0·30 per hour)
Product *B* Rs. 1·80 (6 direct labour hours @ Re. 0·30 per hour).

The rate 30 paise is arrived at as follows :

Budget overhead	Rs. 570
Budget direct labour hours	1,900

For the month of October the following data was recorded for the cost centre.

Output of product *A* 100 units
Output of product *B* 200 units
No opening or closing stock
Actual direct labour hours worked 2,320
Actual overhead incurred Rs. 640

(*a*) You are required to calculate total overhead variance for the month of October.

(*b*) Show its division into

(*i*) Overhead expenditure variance,
(*ii*) Overhead volume variance, and
(*iii*) Overhead Efficiency Variance. (*I.C.W.A. Inter*)

[Ans :

(*a*) Overhead cost variance	Rs. 40 (*A*)
(*b*) (*i*) Overhead expenditure variance	Rs. 70 (*A*)
(*i*) Overhead volume variance	Rs. 30 (*F*)
(*iii*) Overhead efficiency variance	Rs. 96 (*A*)

15. The following figures are extracted from the books of a company :

	Budget	*Actuals*
Output (in units)	6,000	6,500
Hours	3,000	3,300
Overhead cost—Fixed	1,200	1,250
Variable	6,000	6,650
Number of days	25	27

Compute and analyse the overhead variances.

(*I.C.W.A. Inter Dec. 1977*

[Ans.

Variable overhead cost variance	Rs. 150 (*A*)
Fixed overhead cost variance	Rs. 50 (*F*)
,, Budget Variance	Rs. 50 (*A*)
,, Volume Variance	Rs. 100 (*F*)

Fixed overhead	Efficiency Variance	Rs. 4 (*F*)
,,	Capacity Variance	Rs. 96 (*F*)
,,	Calendar Variance	Rs. 96 (*F*)]

16. Compute the overhead variances from the following :

	Budget	*Actuals*
Number of working days	10	11
Man hours per day	8,000	8,400
Output per man-hour (units)	80,000	84,000

[Ans.	Rs.
Overhead Cost Variance	840 (*A*)
,, Expenditure Variance	4,000 (*A*)
,, Volume Variance	,160 (*F*)
,, Capacity Variance	,400 (*F*)
,, Calendar Variance	8,000 (*F*)
,, Efficiency Variance	9,240 (*A*)]

17. Extract from the following data all overhead variances :

Budgeted production ...... 50 lots
Fixed overhead absorption rate Rs. 3 per hour
Actual and Budgeted Variable overheads Rs. 7,500
Standard hours per lot ...... 100 hours
Actual production ...... 60 lots
Actual fixed overheads Rs. 14,500
Actual hours worked 5,600 hours.

[Ans.	Rs.
Variable Overhead Variance	1,500 (*F*)
Fixed Overhead Variance	3,500 (*F*)
Total Overhead Variance	5,000 (*F*)
Fixed Overhead Expenditure Variance	500 (*F*)
Fixed Overhead Volume Variance	3,000 (*F*)
Fixed Overhead Efficiency Variance	1,200 (*F*)
Fixed Overhead Capacity Variance	1,800 (*F*)

Sales Variances

18. A Company operates on standard costing and budgetar control system. The budget for April 1981 and the actuals for the sam month are indicated below :

Product	*Budget*			*Actuals*		
	Sales Kg.	Price Rs./Kg.	Amount Rs.	Sales Kg.	Price Rs./Kg.	Amount Rs.
TA	50,000	10·50	5,25,000	52,000	11·00	5,72,000
MB	20,000	12·00	2,40,000	16,000	11·75	1,88,000
CC	6,000	15·00	90,000	5,000	15·00	75,000
OC	4,000	16·00	64,000	5,000	16·00	80,000
Total	80,000		9,19,000	78,000		9,15,000

Calculate Sales Variances.

[*I.C.W.A.* (*Final*) *Dec. 1981*]

		Rs.
[**Ans.**	Value Variance	= 4,000 (*A*)
	Price Variance	=22,000 (*F*)
	Volume Variance	=26,000 (*A*)
	Mix Variance	= 3,025 (*A*)
	Quantity Variance	=22,975 (*A*)]

19. Aristocrat Supplies Ltd. operates on Budgetary Control and Standard costing system.

From the following data calculate :

(*i*) Sales Variance
(*ii*) Sales Volume Variance
(*iii*) Sales Price Variance.

Product	*Std. cost of Sales per unit*	*Std. Selling price per unit*	*Budget*		*Actuals*	
	Rs.	*Rs*	*b* [illegible]	*Sales Value Rs*	*Units sold*	*Sales value Rs.*
A	10 00	12 00	100	1,200	100	,100
B	9 40	12 00	50	600	50	600
C	7·50	9 00	100	900	200	1,700
D	4 00	6 00	75	450	50	300
			325	3,150	400	0

(*M. Com. Bombay, 1970*)

[**Ans :**

Variance	Turnover method	Margin method
Value Variance	Rs. 550 (*F*)	100 (*A*)
Price Variance	Rs. 200 (*A*)	200 (*A*)
Volume Variance	Rs. 750 (*F*)	100 (*F*)]

20. From the data given below calculate sales variance based on turnover and margin.

Product	*Budgeted Sales*			*Actual Sales*		
	Quantity	*Price per unit*	*Value*	*Quantity*	*Price per unit*	*Value*
		Rs.	*Rs.*			*Rs.*
A	400	6	2,400	500	5	2,500
B	600	5	3,000	700	6	4,200
	1,000	.	5,400	1,200		6,700

Standard Cost of Production

Product	Rs.
A	3
B	4

[**Ans** :

Variance	*Based on Turnover*	*Based on Margin*
Value Variance	Rs. 1,300 (*F*)	Rs. 600 (*F*)
Price Variance	Rs. 200 (*F*)	Rs. 200 (*F*)
Volume Variance	Rs. 1100 (*F*)	Rs. 400 (*F*)
Mix Variance	Rs. 20 (*F*)	Rs. 40 (*F*)
Quantity Variance	Rs. 1,080 (*F*)	Rs. 360 (*F*)]

Miscellaneous

21. The standard cost of a product is as under—

		Rs. P.
Materials	: 20 lbs of M.S. Plate	5·00
Labour	: 15 hours @ 50 P per hour	7·50
Overheads	: 15 hours @ Re. 1 per hour	15·00
	Total	27·50

Standard labour hours per month 30,000

For the month of April 1982, which was the first month of production, the number of units completed were 1,800 units; a further 400 units were half completed with respect to materials, labour and overheads. Other particulars available for April 1982 are—

(*a*) Materials issued	42,000 lbs
(*b*) Materials purchased	50,000 lbs @ 23 paise per lb.
(*c*) Wages paid	29,500 hours @ 52 paise per hour
(*d*) Overheads	Rs. 33,000

Analyse the variances in as much details as possible and compute the manufacturing cost per unit. [*Adapted I.C.W.A. (Final) July 1962*]

[**Ans.** Material cost variance Rs. 340 (*F*); Material price variance Rs. 840 (*F*); Material usage variance Rs. 500 (*A*)].

Labour cost variance Rs. 340 (*A*) : Labour rate variance Rs 590 (*A*); Labour Efficiency variance Rs. 250 (*F*); Overhead variance total Rs. 3,000 (*A*). Expenditure Rs. 3,500 (*A*), Efficiency variance Rs. 500 (*F*). Overheads are treated as variable. Manufacturing cost Rs. 29·00 per unit]

8

Reporting For Management

What is a Report. Management can exercise control only when information is made available to it. The information may relate to physical or financial performance or it may relate to variations of actual costs from standards, where standard costing is in force. Such information is usually [illegible] of written r[illegible] intended for [illegible] obliged to supply financial and other information to its shareholders, tax authorities, stock exchanges and Government agencies like Company Law Administration, Controller of Capital Issues, etc. Such reports to external groups are called external reports. Most of the reports are periodic in nature and are made out at regular intervals of time. Reports pertaining to sales, idle time, operations, plant efficiency and utilisation are made out daily while financial statements are presented to the shareholders annually. There are other reports which are made out weekly, monthly, quarterly, etc. Periodic reports are also referred to as General Purpose Reports. As against general reports, there are special reports intended for special purposes. For example, the management may wish to sell the product in a new market or wish to add a new product line. These are not routine matters. Decisions will have to be taken only after an indepth study of the problem by a special committee resulting in special reports. In some cases the problem may be entrusted to an outside consultancy firm, as for example, when the company wishes to raise additional funds from the capital market.

While special reports are submitted usually to Board of Directors or top managers, general purpose reports are submitted to various levels of [illegible] The various le[illegible]d Ferrara "[illegible] and that sc[illegible] than other levels."* The chart shown below gives an idea about the various types of reporting.

REPORTS

- Internal Reports (for managerial or internal use)
  - General Purpose or Periodic Reports
  - Special Purpose Reports
- External Reports (*for shareholders, Govt. agencies, etc.*)

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* *Management Accounting for Profit Control*, by I. Wayne Keller & William L. Ferrara.

A detailed explanation of all these reports is given below.

External Reports. These are usually prepared once in a year and provide information to shareholders and other interested groups about the operating results and the financial position of the enterprise. In many countries there is legislation regarding the extent of information to be provided in the Annual Reports. As these reports are meant for general public they must be couched in simple language and free from technicalities Information must also be presented in a simple and elegant manner so as to be readily understood by even those who do not know much about accounting. As many shareholders may find it difficult to analyse the balance sheets, the management accounting department usually calculates important ratios such as intrinsic worth per share, dividend earnings per share, dividend cover etc. and these are published in the Annual Reports. Diagrams and graphs are liberally used to highlight the financial and operating success of the enterprise.

Besides Annual Reports which are intended for the shareholders, Company Law Administration, creditors and employees. Other examples of external reports comprise Tax returns to Sales Tax, Income Tax and Excise officials, Returns submitted to Stock Exchange Authorities as an obligation for availing the facility of listing and reports to bank and other credit agencies.

Internal Reports. As already indicated these are of two types; namely, General purpose and Special purpose reports. We shall first consider general purpose reports. These are prepared depending on the level of management and the periodicity varies from a day to a year. It is not possible to list the various reports and the number of reports also vary according to the internal requirements of each organisation. However, a few reports submitted to different levels of management in a manufacturing concern are listed below.

Front line management comprising foremen, supervisors and gang bosses: The reports submitted to them are issued either daily or weekly and are localised to factors like department, production run, machines, group of workers, types of material, etc. These reports deal with output, idle time, idle facilities, overtime, labour or machine cost per unit of output, operating efficiency, materials usage variance, shop expenses, etc. The purpose of these reports is to highlight adverse factors in specific aspects of operations for which the supervisors and foremen are responsible.

Middle Management comprising Departmental and Divisional Heads : The reports submitted to them relate to the activities of the entire department or division. These reports deal with such aspects as plant utilisation, production costs, sales analysis, operating efficiency, departmental budget, etc. The purpose of these reports is to summarize the activities of departments for which they are responsible.

Top Management comprising Board of Directors, Managing Director, General Managers and Functional Heads : The reports submitted to them are usually monthly but with computerisation it has become possible to submit daily reports on matters relating to operations. The reports usually relate to the entire undertaking and cover such aspects as financial statements, quality control

analysis, divisional or functional performance, operating efficiency, capacity utilisation, analysis of profit according to product line and market area, comparison of actual results with budgeted results and showing the analysis of variances.

Special Reports. These reports deal with special problems that may arise such as the demand for wage increase, rising inventory costs, recession, need for additional funds, market competition, utilisation of by-products, modernisation, expansion, price regulation by Government and the like. Some of these problems may be entrusted to a committee of experts for an indepth study of the problem. Usually these reports are submitted to top management on the basis of which policy decisions are taken. For many of the decisions to be taken by the management like to make or buy, accept or reject an order at a given price, price policies in general, sell or process further, the vital data are to be provided from the accounting records. For other decisions like determining volume policies, adding new product line, modernisation and expansion, while the accounting department provides data relating to cost, return on investment and economic evaluation, the production department provides information relating to production aspects and the sales department provides data relating to marketing aspects. Special problems may also be entrusted to specialist consultancy firms for their resolution. In recent years a number of consultancy firms have come up and enterprises can seek their guidance for setting up of new projects, raising capital, marketing products, inventory management, etc.

Functions of Accounting Reports

A primary function of accou [illegible] mation pertaining to the area [illegible] The report highlights unfavourab[illegible] individual to institute corrective action before the situation goes out of control. In big enterprises it is not possible for middle and top managements to personally observe and organize all the facts with respect to production, finance, marketing costs and other aspects of company [illegible] operations.

Emphasising the control function, Neuner (cost accounting) points out that cost reports must summarize the essential facts of production and distribution so that the executive of an enterprise may :

(*a*) measure the effectiveness of their manufacturing and selling methods,

(*b*) measure the effectiveness of supervision,

(*c*) study the trend of operating costs of material, labour and manufacturing overhead,

(*d*) plan future policies or manufacturing methods and processes

(*e*) reduce to the minimum spoilage, waste, and loss.

The reports must be designed in such a way that it should be possible for management to use the principle of exception in reviewing the performance of various divisions and functions. Under standard costing system the basic formal report gives the actual and standard data for a period and pertaining to a specified area of responsibility. A column is provided to show the variance between actual and standard data. These reports may be prepared in physical units or rupees. Reports stated in units are better understood at shop level whereas those expressed in rupees are most appropriate to middle and top management. Such reports help the management at all levels in concentrating the attention on favourable or unfavourable situation rather than wasting time in reviewing operations which are going on as per the plan.

Reports help business achieve their goal of profitable operations. Analysis and interpretation of records, of course, cannot ensure profits, but can definitely set forth problems in order to stimulate executive action to achieve appropriate solutions.

Requirements of a Good Report

A report is a written communication intended to convey physical or cost facts to the management with a view to enable the latter to take appropriate action. If the report is to serve the intended purpose it should satisfy certain requirements which are listed below.

1. **Good format.** The report must have a good format with suitable title and sub-headings. For some of the routine cost reports printed forms can be used.

2. **Essential facts.** The report must convey only bare essential facts. In some cases opinions may have to be expressed as in the case of special reports. In such cases the report should try to present the implications of various alternatives. It is not safe to assert in the case of opinions as they are not facts. Any opinion must be carefully expressed after an indepth study of the problem.

3. **Simplicity and clarity.** The language used in the report should be simple, clear and logical. For this purpose compound sentences, ambiguous wording and the use of negative expressions should be avoided. Information should be presented in a logical sequence. As far as possible the language and the jargon used in the report must be familiar to the executive who is going to read it. There is no reporting at all if the reader is not in a position to understand the contents of a a report.

4. **Accuracy.** The report should be accurate. Otherwise the decisions taken on the basis of a false report will land the enterprise in trouble. Of course when we speak of accuracy we only mean reasonable degree of accuracy. The degree of accuracy must be determined after balancing the cost and utility considerations.

5. **Promptness.** If the reports are not timely, it may not be possible for the executives to take action in time. Delayed information and delayed action serve no purpose. Therefore, the reporting system must

be built up in such a manner that promptness is taken care of. According to Blocker and Weltmer "...... it is important to focus managerial attention on off-standard conditions immediately following each shift, day, or week rather than to accumulate and summarize variances from standard each month."

6. **Appropriate to the executive.** This means two things. First, it must be appropriate to the knowledge, interest, status and responsibility of the reader. For example, when the report is intended for Production Manager it must deal with matters concerning his interest and area of responsibility. At different levels matters to be reported and the form in which they should be reported are different. *Secondly,* higher the executive level the matter to be reported should be summarised avoiding details. The reports must be presented in such a manner that the top management must be able to make use of the principle of 'Management by exception'. Lower the level of the executive, more detailed must be the report. The reports submitted to direct supervisors must be specific, detailed and at shorter time intervals.

7. **Significant trends and relationships.** Reports must highlight significant trends and relationships of information presented. For this purpose data presented must be compared with standards or data of previous period. This enables management to discover areas which are not functioning properly and take appropriate action instead of reviewing the performance in all the areas. However, this requires preparation of reports on a consistent basis. If the definitions are changed quite frequently the present data cannot be compared with the data of previous periods or standards.

8. **Method of presentation.** The writer may use graphs, charts and diagrams to improve the management's understanding of the information presented. It is, however, preferable to append such documents rather than incorporate them in the body of the report. Such documents can be numbered and referred to in the body of the report at appropriate places.

[illegible] ...ount spent on the report must be [illegible] from such a report. There must [illegible] from this angle and reports which use up lot of resources without much utility should be dispensed with.

Report Improvement Programme

The following steps should be taken to continuously improve the reporting system :

1. It will a good practice to obtain the views of the readers of [illegible] improve- [illegible] system [illegible]

2. The accounting records should be devised in much a manner that the data required for the reporting system are obtained without additional analysis.

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8. **Method of presentation.** The writer may use graphs, charts and diagrams to improve the management's understanding of the information presented. It is, however, preferable to append such documents rather than incorporate them in the body of the report. Such documents can be numbered and referred to in the body of the report at appropriate places.

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Report Improvement Programme

The following steps should be taken to continuously improve the reporting system :

1. It will a good practice to obtain the views of the readers of [illegible] improvement [illegible] system [illegible]

2. The accounting records should be devised in much a manner that the data required for the reporting system are obtained without additional analysis.

3. As stated earlier, there must be devised periodic evaluation of the reports in force and efforts should be made to reduce the number of reports and simplify wherever possible.

4. With the introduction of electronic data processing systems it should be possible to ensure prompt and quality reporting. As this is the age of computers it should be possible to cater to the information needs of the management by careful planning.

5. The last step in a comprehensive reporting system is to develop information presentation techniques that make it easy for the non-accounting executive to understand and use his reports.

ASSIGNMENT MATERIAL

1. Distinguish between

(*a*) General Purpose Report and Special Purpose Report.

(*b*) Internal Report and External Report.

2. What do you understand by the term 'reporting to management'.

Discuss briefly the matters that you would deal with while reporting to Board of Directors. *(C.A. Final 1964)*

3 What in your opinion are the requirements of a good report ?

4. 'The contents of the report must be appropriate to the knowledge level and responsibility of the executive." Elucidate.

5. You are asked to evaluate the reporting system and suggest improvements. How do you proceed with the job ?

9

The Nature of Management Accounting

Scope of this Chapter

This chapter is written basically to cover the following aspects :

(*a*) the nature of management accounting,

(*b*) its scope and limitations,

(*c*) its functions, tools and techniques, and

(*d*) *its relation with financial and cost accounting.*

This chapter provides the logic and background for a proper understanding of the various topics covered under the section 'Financial Statement Analysis'.

Introduction

The subject management accounting is developed in order to overcome the deficiencies of financial accounting Ficancial accounting is primarily concerned with routine reporting of financial results to external parties like shareholders, creditors, Government agencies regulating companies and taxation authorities Also the information generated by the financial accounting system is of historical nature It is a post-mortem of events that have already taken place. Financial accounting does not help an undertaking to influence or plan its profits. On the other hand, management accounting enables the management to look forward and plan for the results. It provides the necessary data for such planning as well as decision-making and in the end measures the actual performance as against the planned performance. Such comparison enables the management to know the causes for variance of actual profits from planned *profits and institute corrective measures. Management accounting also* provides data to managers at various levels and to managers of different functions, to assess and also improve their operating efficiency. It enables them to take decision on scientific basis and not by the rule of [illegible] need for management [illegible] operating units and management personnel in the business A one-man business has little or no need for control data, for the operator-producer-distributor knows what he has done and what he is doing... Moving to the other extreme, the multi-plant company is like the multi-engine plane. Every member of *the crew must know what is happening in the mechanism for* which he is reponsible and must have every possible indication of what may happen. In addition, these data must be transmitted to the captain and other crew members, and their probable effects upon the other p[illegible]of

the plane must be evaluated.... All deviations from established plans must be evaluated and communicated to the persons having responsibility so that decision can be made as to when and how to correct or compensate for the failure in order to reach the planned objective with maximum safety and minimum delay. In business this process of recording, evaluating, and communicating history and plans is management accounting."* From the discussion it is clear that management accounting meets the internal requirements of the business and for this purpose is interwoven with management itself.

The landmark in the development of management accounting was the lead taken by the Anglo-American Council on Productivity in 1950 when it emphasized the need to develop accounting information as an aid to management. This, however, does not mean even remotely the neglect of routine accounting procedures involved in financial accounting. The data needed for management accounting has to be obtained and generated from the records of financial accounting. Actually the same set of books provide data for all the branches, namely, financial, cost and management accounting. The difference lies only in the use and emphasis. It is very difficult to lay the boundaries only in the three disciplines as all of them are interrelated. According to Keller (*Management Accounting for Profit Control*) "management accounting for profit control includes income accounting, cost accounting, and budgetary planning and control."

Definitions of Management Accounting

The simplest definition is the one given by Anthony (*Management Accounting*). It describes it simply as "concerned with accounting information that is useful to management." The most elaborate one is given by the American Accounting Association's 1958 Committee on Management Accounting. According to this committee "management accounting is the application of appropriate techniques and concepts in processing the historical and projected economic data of an entity to assist management in establishing a plan for reasonable economic objectives and in the making of rational decisions with a view toward achieving these objectives. It includes the methods and concepts necessary for effective planning, for choosing among alternative business actions, and for control through the evaluation and interpretation of performance. Its study involves consideration of ways in which accounting information may be accumulated, synthesised, analysed, and presented in relation to specific problems, decisions, and day-to-day tasks of business management."

The committee adds that "in the broad sense all accounting is management accounting." But in a narrow sense, "management accounting is distinguished by emphasis upon purpose, the point of view predominating, and upon potential management use."

According to the Anglo-American Council on Productivity, management accounting may be defined as "the presentation of accounting

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**Management Accounting for Profit Control* by Keller and Ferrara.

information in such a way as to assist the management in the creation of policy and in the day-to-day operations of an undertaking."

Other definitions of Management Accounting are given at the foot of the page.

Field of Management Accounting

From the definitions given earlier it is clear that the main role of management accounting is to furnish quantitative information to managements to enable them to take appropriate decision. This involves (1) choosing the appropriate among several alternatives available and (2) to measure and evaluate consequences that follow the implementation of such decision. It is the management accountant who provides the necessary accounting information to enable the managers to take correct decisions. Thereafter he also provides them with data needed to evaluate the decisions taken. For this purpose management accounting embraces the knowledge of the following specialised fields of activities :

(*a*) *Financial Accounting*. The management accountant has to gather his facts mostly from financial accounting system. As stated by Brown and Howard while the financial accountant is concerned with the day-to-day running of affairs, the management accountant is concerned with the extraction of information from records on a selective basis, analysis and compilation of statements which will enable the management to function with the minimum of effort and maximum efficiency. For this purpose financial accounting must be devised in such a manner that it is available for activity or responsibility centres. It must also provide data needed for problem solving and decision-making without special effort every time. With proper planning it should not be difficult to obtain data required for the managerial functions like planning, organizing, and controlling, from the records of financial accounting. As expressed by Lamperti and Thurston (*Internal Auditing to Management Controls*) without a properly devised financial accounting system management cannot obtain full control and coordination of operations.

(*b*) *Cost Accounting*. Cost Accounting comprises recording of [illegible] to jobs, operations, processes, [illegible] t data are vital to a management [illegible] ·elevant and timely information to the management. It enables management to compare the actual costs with planned costs and guide in achieving the profit objective. The cost techniques of budgetary control, standard costing, and marginal costing form the core of management accounting.

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(1) B own and Howard (*Principles and Practice of Management Accountancy*). [illegible] accounting which [illegible]

(2) Institute of Chartered Accountants, England : "any form of accounting which enables a business to be conducted more efficiently can be regarded as Management Accounting."

(3) Batty, J (*Management Accountancy*) : "Management Accountancy is the term used to describe the accounting methods, systems, and techniques which, coupled with special knowledge and ability, assist management in its task of maximising profits or minimising losses."

(*c*) *Statistical Methods.* Graphs, charts, pictorial representation, index numbers, and other statistical methods help in increasing the effectiveness of the presentation. They also improve management's understanding of the information. Statistical methods are also useful in decision-making.

(*d*) *Operations Research.* This is a new discipline which makes use of certain mathematical and statistical models for decision-making. Linear Programming is a mathematical model that helps in maximizing the profit or minimizing cost in typical situations where limited resources can be put to numerous uses. There are also models which can be used in the field of inventory control and transportation. These techniques are useful in planning and control and although the organisation may employ mathematics specialists and make use of computers, still there is need for the management accountant to acquaint himself with this branch. Otherwise his position may be usurped by others. It is for this reason that 'quantitative techniques' has been introduced as a paper by the accountancy bodies in the examinations conducted by them.

(*e*) *Economics.* A new branch of Economics known as Managerial Economics is of great importance to management accountant. According to Spencer and Siegelman managerial economics is the integration of economic theory with business practice for the purpose of facilitating the decision-making and forward planning by management. Economics provides certain tools and techniques which will help to analyse business situation and enable management to exercise proper choices and therefore is useful for optimisation. Some of the areas where there is great scope for the application of the knowledge of economics are project feasibility studies (location, profitability, financing and demand estimation), capital budgeting (risk analysis), product mix, price fixation and determination of optimum size.

(*f*) *Statutory Enactments.* Various laws and statutory provisions have a bearing on the functioning of management accountant. The management accountant must be familiar with the provisions of the Companies Act relating to issue of capital accounts and audit. He must also be aware of the relevant provisions in the Foreign Exchange Regulation Act (FERA), Capital Issues (Control) Act, 1947, Industries (Development and Regulation) Act, 1951, M.R.T.P. Act and Income Tax Act.

Functions of Management Accounting

It has been repeatedly stated earlier that the essence of management accounting lies in its use to management. Therefore it is essential to know the functions of management first, so as to understand how management accounting can function in order to serve the management. The functions of management are :

(*a*) formulating a business plan,

(*b*) fixing of the responsibility at various levels in the implementation of the plan,

(*c*) organising which comprises arranging the scarce resources of the enterprise in a manner designed to achieve the goals of the plan.

(*d*) controlling performance which means checking actual results with planned results and instituting corrective action in case of deviation from planned results.

To enable the management to discharge the above functions, the management accountant has the following functions :

(*a*) to provide data for the formulation of business plans,

(*b*) to split the plan so as to fix the responsibilities at all managerial levels,

(*c*) to evaluate the capability of the organisation and methods employed in executing the plan and to point out the shortcomings and bottlenecks in implementing the plan,

(*d*) to provide workable standards of performance, to measure the [illegible] and to compute and analyse the vari- [illegible] o control easily through the technique [illegible]

(*e*) to report to the management regarding the results of the plan just completed. Such reporting helps the management a lot in formulating the next business plan.

Special Features of Management Accounting

(*a*) The emphasis of management accounting is on the future, while that of financial accounting is on the past. The technique of budget [illegible]

(*b*) The information provided by financial accounting is of general nature. However, in cost accounting the information is more detailed and specific pertaining to products, departments, territories, etc. But still for management purposes the information is not readily usable. Management accountant has to select relevant data and present the statement in such a manner that it facilitates the management to take a correct decision.

(*c*) The pattern and behaviour of the costs is the very basis for control. The division of costs into fixed, variable, and semi-variable is so important in all matters of managerial decisions, such as decisions to make or buy, pricing in export markets, and further processing of by-products.

(*d*) The emphasis in management accounting is to establish the relationship between cause and effect of any activity. This is not the case with financial accounting. Financial accounting merely reveals the [illegible] In management account- [illegible] lain the causes for the rise [illegible] gement to take remedial measures where necessary.

[illegible] th performances which [illegible] responsibility is fixed [illegible] ement of reviewing all [illegible] l to do in the absence of standards.

(*e*) According to Horngren (*Introduction to Management Accounting*), accounting system provides information for (1) managerial use in planning and control, (2) strategic planning, and (3) external reporting to shareholders and other groups. While the emphasis of financial accounting is on external reporting, the emphasis of management accounting is on internal reporting to management. It is for this reason that management accounting is also called 'Internal Accounting.'

From the above discussion it is clear that management accounting is concerned with the internal requirements of the organisation and aiding the management in its efforts to improve the efficiency of the business.

Tools and Techniques of Management Accounting

As already observed, management accountant has to furnish information to the management. The information furnished by him is varied in character. To start with he has to provide diagnostic information which he has to cull out from past records. Next, he has to provide data for the formulation of business plan which considers several alternatives. Planning also involves long-range planning and again it is the management accountant who has to assist the management in Capital Budgeting Lastly, he has to provide information necessary for control. All this is possible only by employing certain tools and techniques. The management accountant has an array of tools and techniques which he can apply in the discharge of his duties. Important of them are discussed below. The discussion is very brief as there is a detailed coverage of these techniques in the preceding chapters.

(1) *Ratio Analysis*: This technique is useful in performance appraisal, raising short-term and long-term funds, budgeting, investment of funds, etc.

(2) *Standard costing*: This technique is of great use in fixing responsibilities, cost appraisal and control. It helps top management to concentrate their attention on significant deviations from expected results and facilitate 'management by exception.'

(3) *Budgetary Control*: This technique is useful in profit planning and is invariably applied together with standard costing to enable management to exercise control.

(4) *Cash Flow and Funds Flow Statements*: These statements are useful in the management and proper planning of cash and working capital funds.

(5) *Marginal Costing*: This technique is very useful in the area of decision-making. Price fixation in special situations, make or buy decisions, key factor contribution, determination of optimum level of production, profit planning are some of the important areas in which this technique is made use of.

(6) *Mathematical and Statistical Models*: Techniques like Linear Programming, Queuing Theory, Decision Theory, P.E.R.T., C.P.M. and other quantitative techniques are being increasingly applied in the determination of product-mix, inventory control, project and product planning, transportation and other areas.

Statistical techniques are also used in forecasting and presentation of information. While techniques like analysis of time series and interpolation are useful in demand estimation, histograms, frequency curves, ogives, charts and diagrams are useful in the presentation of information to the management.

It is not possible to list all the techniques that a management accountant uses. He also uses break-even charts, inter-period, inter-firm comparisons, cost data like unit costs, etc. An attempt is made to discuss only the most important techniques in the arsenal of the management accountant.

Advantages of Management Accounting

Management accounting claims following advantages :

(*a*) Management accounting helps a firm to make it free to a great extent from inherent jumps and jolts of seasonal nature of business and normal trade cycles. The business activities are regulated systematically with the help of efficient planning and organisation, thus avoiding overworking in busy periods and slackness in slump periods ;

(*b*) It enables the business to get the maximum return on capital by helping it in planning, distribution, and controlling activities ;

(*c*) It helps the management to improve its services to the customers by resorting to a continuous method of comparing the results with standards ; and

(*d*) It helps in improving the relations between the management and labour by avoiding unreasonable standards of work which are the chief cause of labour unrest.

Limitations of Management Accounting

(*a*) Management accounting derives its information from Financial Accounting, Cost Accounting and other records. Therefore, conclusions made by the management accountant depend to a large extent on the accuracy with which financial and cost records are kept. Strength and weakness of management accounting depend upon the strength and weakness of basic records.

(*b*) Execution of the conclusions drawn by the management accountant will not occur automatically. In fact management must be 'sold' to efficiency and must participate in the programme.

(*c*) Management accounting will not replace the management and administration. It is a tool of management. Decisions are of management and not of management accountant. Of course, in order to enable the management to take decision by the rule of exception, the management accounting will save the management from being immersed 'in accounting routine or from becoming 'slave' to the operation of balancing. It will process the data and put before the management the facts deviating from the standard.

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Characteristics of a Good Accounting Statement prepared for Management Purpose

(*a*) The statement must be presented at the right time and be made as accurate as possible in the authorised time limits. In this regard it may be mentioned that it is better to have information in time even with some degree of approximation than to have more accurate information received too late to be of maximum use.

(*b*) The statement should be headed with a short meaningful title.

(*c*) The period covered by the statement should be clearly specified.

(*d*) The date of preparation should be shown.

(*e*) The units measured and the quantities in which they are expressed should be stated clearly.

(*f*) The figures should be rounded off to avoid unnecessary details.

(*g*) Meaningful sub-totals should be provided and wherever possible detailed calculations be relegated to an appendix.

(*h*) Clear comparisons should be given and expressed in the same quantities and units as the reported data.

(*i*) The person presenting the statement should be specified.

(*j*) All persons receiving the statement should be indicated.

Management Accounting Distinguished From Financial Accounting

Under the sub-heading "Definition of management accounting" it has already been stressed that heap of data furnished by the financial accounting is to be *rearranged* for the busy management of today's large-scale business organisation. It, therefore, flows from the definition that managerial accounting is not the same as financial accounting. It is different from it. The difference between the two is based partly on the *use* of accounting data, partly on the degree of *detail* supplied, partly on *methodology* through which the data are accumulated and partly on the *emphasis* for which data are supplied.

From the utility point of view managerial accounting provides internal data to managers to help them in making decisions about the future of the firm. Financial accounting, on the other hand, aims at meeting the requirements of the outsiders, *i.e.*, parties who are interested in the firm because of their financial stake either in the form of share capital or in the form of loan capital.

In terms of details supplied, management accounting finds to be much more extensive than financial accounting. Information supplied to outsiders is grossed to one figure but management is supplied with details of its composition, reason for such a pattern, and also its interpretation about the future possibilities.

Management accounting and financial accounting both differ on the methodology applied for the collection of facts. Financial accounting collects information for the outsiders and must be very correct. They are mere facts and collected under the set rules and regulations so that outsiders may feel confident about the usefulness of the concern. Mana-

gement accounting, however, is not bound by the rules so laid down for reporting to outsiders. Managers are entitled to demand any internal information they need and they may ask it to be presented and measured in any fashion they wish. Accounting information for internal use is tailored according to their needs.

From emphasis point of view, it may be seen that financial accounting focuses largely on past events that have occurred in the business. Management accounting, on the other hand, collects data useful in planning, organising and controlling the business. For this, it takes into consideration *both* past and future events to a significant extent. This information is properly arranged and made available to the management for decisions.

Management accounting furnishes data for evaluating the alternatives open to them in taking decision by making significant comparisons of monetary consequences of those alternatives. Financial accounting reports, made for outsiders, do not specify any alternative courses and comparative financial [illegible] those alternatives. The distinctions [illegible] management accounting may be [illegible]

1. In most of the big business houses financial accounting is the responsibility within the management accounting. It is the duty of financial accounting to process the mass of unwieldy data and make free the management accountant from the details. The management accountant in its turn, sorts out the significant figures and channels them for the use in management process. Management accounting offers figures as facts having managerial significance.

Financial accounting is more confined to the preparation of accounts from the point of view of outside parties (*e.g.*, debenture-holders, creditors, shareholders) while management accounting uses the information for internal use of management.

3. Financial accounting tries to present statements according to [illegible]

4. Financial accounting is made compulsory by law but management accounting is adopted to increase the efficiency without any legal force.

5. Financial accounting lays emphasis on the past while management accounting stresses the *future*.

6. Financial accounting deals with the whole of the business while management accounting takes up only those divisions of the business which are vital and significant in business activities.

The Management Accountant

A management accountant is called by several [illegible] although the functions performed are the same as [illegible] of the employment advertisements reproduced below:

(1) Chief Accountant: The position reports to the Managin Director and entails responsibility for accounting, finance, tax plannin and management information for a multi-unit operation.

(2) Controller of Finance and Accounts: The Controller Finance and Accounts will be overall incharge of the finance, accounti and taxation functions. He will report directly to the Managi Director.

(3) Management Accountant: A well known group of compan having diversified interests including tea estates, wants a bright a dynamic Management Accountant to be located at one of the estates in Annamalais. The position reports to the General Manager, Plantatio

Responsibilities will include cash management, budgeting, costi management reporting and basic accounting. The group attaches co derable importance to management information.

(4) Finance Manager: Incumbent will be responsible for Fina and Accounting, day-to-day accounting, finalisation of accounts, budget control, etc. In addition, he will effectively liaise with Banks and Financ Institutions.

(5) Chief Cost and Works Accountant: This is a senior pos reporting to the General Manager. It places a high degree of deman the candidate's acumen for designing, implementing and monit Standard Costing Systems. He will also be responsible for overall s vision of financial activities in an engineering industry.

A perusal of the above advertisements clearly shows that althoug position calls for the same functions it is called by various names. names also differ from country to country. In U.S.A. the chief man ment accounting executive is called controller or comptroller. In U Corporations there is another post called treasurer to take care of fu tions like investment, borrowings from banks, provision of capital, cre investigation and collection of book debts. In our country we do have a comparable post. The Controllers Institute of U.S.A. recommended the following organisation status of the Controller.

(*a*) The controller should be an executive officer at the policy-ma level responsible directly to the chief executive officer of the business: appointment or removal should require the approval of the Boar Directors.

(*b*) The controller should be required by the Board of Directo present directly periodic reports covering the operating results and fi cial condition of the business, together with such information as it request.

(*c*) The controller should preferably be a member of the Bo Directors, and all other top policy-making groups. At the minim should be invited to attend all meetings of such groups with the ri be heard.

Regardless the differences in the position of the controller in the organisation, normally he performs the following functions* :

1. To establish, coordinate, maintain, and through authorised management, an integrated plan for the control of operations. Such a plan would provide, to the extent required in the business, cost standards, expense budgets, sales forecasts, profit planning and programmes for capital investment and financing, together with the necessary procedures to effectuate the plan.

2. To measure performance against approved operating plans and standards, and to report and interpret the results of operations to all levels of management. This function includes the design, installation and maintenance of accounting and cost systems and records, the determination of accounting policy, and the compilation of statistical records as required.

3. To measure and report on the validity of the objectives of the business and on the effectiveness of its policies, organisation structure [illegible] objectives. This includes consul- [illegible] gement responsible for policy or [illegible] peration of the business as it relates to the performance of this function.

4. To report to government agencies, as required, and to supervise [illegible]

[illegible] report on the effects of external influences on [illegible] business. This function includes the [illegible] social forces and of governmental [illegible] of the business.

6. To provide protection for the assets of the business. This function includes establishing and maintaining adequate internal control and auditing, and assuring proper insurance coverage.

Duties of a Controller

The most well-known and authoritative collection in this direction is that of the Controllers Institute of America who has defined the duties of the controller as below :

1. The installation and supervision of all accounting records of the corporation.

2. The preparation and interpretation of the financial statements and report of the corporation.

3. The continuous audit of all accounts and records of the corporation, wherever located.

4. The compilation of production costs.

5. The compilation of cost of distribution.

6. The taking and costing of all physical inventories.

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* Controllers Institute Committee on Ethics and Eligibility Standards (*Controller*, Vol. 20), quoted in *Accountant's Hanbook, Op. Cit*, p. 44.

7. The preparation and filing of tax returns and the supervision of all matters relating to taxes.

8. The preparation and interpretation of all statistical records or reports of the corporation.

9. The preparation, as budget director, in conjunction with other officers and department heads, of an annual budget covering all activities of the corporation, for submission to the Board of Directors prior to the beginning of the fiscal year. The authority of the controller, with respect to the veto of commitments or expenditures not authorised by the budget shall, from time to time, be fixed by the Board of Directors.

10. The ascertainment currently that the properties of the corporation are properly and adequately insured.

11. The initiation, preparation and issuance of standard practices relating to all accounting matters and procedures and the coordination of systems throughout the corporation, including clerical office methods, records, reports and procedures.

12. The maintenance of adequate records of authorised appropriations and the determination that all sums expended pursuant thereto are properly accounted for.

13. The ascertainment currently that financial transactions covered by minutes of the Board of Directors and/or the Executive Committee are properly executed and recorded.

14. The maintenance of adequate records of all contracts and leases.

15. The approval for payment (and/or countersigning) of all cheques, promissory notes and other negotiable instruments of the corporation which have been signed by the Treasurer or such other officers as shall have been authorised by the by-laws of the corporation or from time time designated by the Board of Directors.

16. The examination of all warrants for the withdrawal of securities from the vaults of the corporation and the determination that such withdrawals are made in conformity with the by-laws and/or regulations established from time to time by the Board of Directors.

17. The preparation of approval of the regulations of standard practices required to assure compliance with orders or regulations issued by duly constituted governmental agencies.

Management Information System (MIS)

With the development of management science and the advent of computer, management information system has come into vogue. Management information system is concerned with the generation of economic data and making it available to the management and not merely the accounting information. It is for this reason that MIS. is designed and improved by a group consisting of a management accountant, operations research expert, economist and data processing manager. This group is usually designated as the management services group.

Robert Anthony divides the managerial activity broadly into strategic planning, management control, and operational control. While the top management is concerned with the first two aspects the middle management is concerned with the third aspect. Information system must be built up to meet all the requirements. Strategic planning deals with introduction of new product, changing the technology, and planning to meet market competition. Management control is usually exercised through the techniques of budgetary control and standard costing. Operational control is concerned with aspects of inventory control, collection of book debts etc. which provide the possibility for programmed decisions. In matters coming under managerial control, management has to exercise its judgment.

With the advent of MIS the management accountant faces a challenge from other professionals like oprations research expert and computer professionals. There is already a controversy as to who should head the MIS group. The management accountant has to reorient himself to the new tasks, otherwise, the dominant position he has enjoyed hitherto may be lost to others.

ASSIGNMENT MATERIAL

Questions

1. Explain the term "Management Accounting", and state what do you consider to be its main objectives.
2. Set the main headings under which accounting information should be supplied to the management and indicate how the accountant arranges for the compilation of his information.
3. What do you understand by "Management by exception" ? How ... assist in ens ... itiated and o ... cogent examples. *(I.C.W.A)*
4. Why is it necessary to make a distinction between management accounting and general financial accounting ?
5. Management accounting should be restricted in scope to *internal* measurement which can be expressed in terms of money. Do you agree with this statement ? Why ?
6. "......Financial accounting focus primarily on *past* events that have resulted in business transactions."

   (*a*) How does this focus of attention differ from that of mangerial accounting ?

   (*b*) If financial accounting deals largely with past events, why do difficulties arise in choosing from alternative measurement rules ?

   (*c*) It has been contended that every single measurement which appears on a statement of financial position is based upon some assumption about the future. If financial accounting deals with past events, how can this be true ?

7. What is mangement by exception ? How does accounting assist in this process ? Should all exceptions be reported for managerial consideration ? What criteria should be laid for selecting which exception to report, if not all ?

8. How does controllership serve management ?

9. The accountant's record-keeping function has been regarded by many as "necessary evil". If the art of management is essential and enduring, is there any real need for the management accountant's function ?

10. Distinguish between financial and managerial accounting. Why is it useful to make such a distinction ?

10

Marginal Costing and Profit Planning

What is Marginal Costing ?

We have seen earlier that the main role of management accountant is to assist the management to take decision. Decision-making is essentially a process of choosing between alternatives. Marginal costing helps the manager by providing information regarding economic differences pertaining to several alternatives. Marginal costing may be considered as the core topic of the subject of management accounting and is a very useful technique for profit planning. As a technique of costing it can be applied to all types of industries irrespective of the method of costing applicable to the particular industry, *viz.*, job costing or process costing.

If we want to understand the concept of marginal costing we should start our discussion with the behaviour of costs, particularly in the short term. There are some costs which are time-based and do not respond to changes in output. Rent is the best example of this type of cost. It is generally expressed as so much per unit of time. So the change in this cost is in proportion to the length of time involved. Such costs are known fixed costs. There are other costs which respond to changes in output only. Material is the best example of this type of cost. It is generally expressed as so much per unit of output. So the change in the material cost is in proportion to change in the level of activity. Costs which are activity based are known as variable costs. There are some costs which respond to changes in output but not in direct proportion. Such costs are neither wholly fixed nor wholly variable. These are referred to as semi-variable or semi-fixed. Costs like supervisors' salaries, expenditure on maintenance, depreciation, telephone bills are examples of [illegible] ne and activity. For our analysis, it is [illegible] nd variable components of such expenses [illegible] all costs into two categories, *viz.*, fixed and variable.

Now it is relevant to give the definitions of marginal cost and marginal costing.

"Marginal cost is the amount at any given volume of output by which the aggregate costs are changed if the volume of output is increased or decreased by one unit. In practice this is measured by the total variable cost attributable to one unit." (I.C.M.A., London)

For our purpose marginal cost is the aggregate of variable costs incurred for a specified level of activity.

"Marginal costing may be defined as the technique of assigning variable costs only to get units, the fixed costs being written off against the total contribution of the products and services sold by the enterprise."

Marginal cost distinguished from other terms

There is difference in the sense in which marginal cost is used by the economists and the management accountant. For an economist it is the difference in total cost arising as a result of producing one more unit. For the management accountant it may be the variable cost of one unit or one project or the variable costs relevant to several alternatives. Marginal cost is referred to as direct cost by the American accounting profession and therefore in American books one finds a chapter on 'direct costing' in the place of 'marginal costing'.

Differential cost distinguished from marginal cost. People often confuse marginal costing with differential costing. These two are, however, entirely different concepts. Differential costing is a technique used in decision-making in which differences of cost and income relevant to several alternatives are considered. This will help to select the alternative which is most profitable among the several alternatives. Differential costing is wider in scope than marginal costing. In the words of Harper, "marginal costing is merely a special application of differential costing". While in marginal costing the assumption is that fixed costs remain unchanged, under differential costing there is no such assumption. Therefore, differential costs may include both fixed and variable costs.

Relevant costs distinguished from marginal costs. Horngren in his book 'Introduction to Management Accounting' has recommended the relevant cost approach to special decisions such as adding products, selecting equipment, make or buy, sell immediately or process further and the like. In such situations "the relevant information is the expected future data that will differ among alternatives". If the management has two alternatives, costs that are common to both the alternatives are not relevant. It is only the costs that differ among alternatives that are relevant for decision-making. According to him all historical costs are not relevant costs as decision-making is about future. However, past costs may become the basis for considering future data. In formal analysis the exclusion of irrelevant costs improves the clarity of reports. As we will see later, relevant cost approach can be combined with contribution approach to solve a vast range of managerial problems. Relevant costs, however, may include fixed as well as variable costs and, therefore, are akin to differential costs and not marginal costs.

Marginal costing and absorption costing

For marginal costing purpose costs are classified as fixed and variable and the latter alone are charged to cost units. Under functional approach costs are classified as manufacturing, selling, administration, etc., and the cost units bear both fixed and variable costs. Under absorption costing, cost units are charged with total costs, *i.e.*, both fixed and variable.

The Mathematics of Marginal Costing

Under absorption costing sales minus cost given us the profit, since cost includes all the costs. This may be expressed symbolically as

$$S - T = P$$

where S = Sales

T = Absorption cost or total cost

P = Profit

Under marginal costing sales minus marginal cost is not equal to profit since in the marginal cost we have not included the whole range of fixed costs. So a new term known as 'contribution' is used to express the difference between sales and marginal cost. Profit is the difference between contribution and fixed costs. If the contribution is equal to exprenses, it repesents the zero profit points. If contribution is less than fixed expenses it is a case of loss. We can restate the relationship using symbols

$$S - M = C \qquad ...(i)$$

$$C - F = P \qquad ...(ii)$$

or $$C = F + P \qquad ...(iii)$$

where M = Marginal cost

C = Contribution

F = Fixed cost

Substituting the value of C in equation (*i*)

$$S - M = F + P \qquad ...(iv)$$

or $$S - M - F = P \qquad ...(v)$$

Equations (*iv*) and (*v*) are referred to as marginal costing equations.

Presentation of Accounting Information Under Marginal Costing

For each product of activity, marginal costs alone are deducted from sales to arrive at the contribution. The contribution of different products merges into a fund from which the fixed expenses are subtracted to determine the profit. Since the word contribution is most important in decision-making, this techniques is also referred to as contribution approach.

Illustration 1. From the data given below prepare the profit statement of Sathya Ltd., using—

(*a*) Absorption costing

(*b*) Marginal costing.

	Product		
	A	*B*	*C*
	Rs.	Rs.	Rs.
Direct material	5	3	2
Direct labour	4	2	2
Variable overheads	3	1	1
Fixed overheads	4	3	2
Sales price	20	8	10
Production and sales (units)	8,000	6,000	5,000

There was no under or over-absorption of fixed overheads at this level of activity.

Solution :

(*a*) **Under absorption costing**

	Products A	*Products* B	*Products* C	*Total*
	Rs.	Rs.	Rs.	Rs.
Direct Material	40,000	18,000	10,000	68,000
Direct Labour	32,000	12,000	10,000	54,000
Variable Overheads	24,000	6,000	5,000	35,000
Fixed Overheads	32,000	18,000	10,000	60,000
Total (absorption) Cost (T)	1,28,000	54,000	35,000	2,17,000
Sales (S)	1,60,000	48,000	50,000	2,58,000
Profit (S—T)	32,000	(6,000)	15,000	41,000

Figures in brackets indicate loss.

(*b*) **Under marginal costing**

	Product A		*Product* B		*Product* C		*Total*	
Sales (S)		1,60,000		48,000		50,000		2,58,000
Marginal Costs								
Direct Material	40,000		18,000		10,000		68,000	
Direct Labour	32,000		12,000		10,000		54,000	
Variable overheads	24,000	96,000	6,000	36,000	5,000	25,000	35,000	1,57,000
Contribution		64,000		12,000		25,000		1,01,000
Less : Fixed expenses								60,000
Profit								41,000

(*i*) Sales — Marginal Cost = Contribution
Rs. 2,58,000 — Rs. 1,57,000 = Rs. 1,01,000

(*ii*) Contribution — Fixed costs = Profit
Rs. 1,01,000 — Rs. 60,000 = Rs. 41,000

Profit = Sales — Marginal cost — Fixed costs
Rs. 41,000 = Rs. 2,58,000 — Rs. 1,57,000 — Rs. 60,000

COST-VOLUME-PROFIT ANALYSIS

Managers of profit seeking organisations are often interested in finding out the behaviour of costs, revenues and the net profit to changes

in volume of activity, as a result or expansion or contraction. Expansion may arise due to market factors or the addition of a product line because of the availability of spare capacity. Likewise, management may be interested in dropping a particular product which has high cost structure and/or poor market demand. In all these cases management can take decision only on the basis of an analysis of how costs, revenues (sales) and profit respond to changes in volume of activity. Managers can decide the optimum level of activity only on the basis of cost-volume-profit analysis which is very essential in the context of profit-planning. This topic is discussed under marginal costing for the simple reason that in many cases the costs that are relevant to the cost-volume-profit analysis are the variable costs.

BREAK-EVEN ANALYSIS

People often use the two terms cost-volume-profit analysis and break-even analysis interchangeably. This is patently wrong. We may consider the break-even point as the starting point of our discussion. Break-even point is the level of activity expressed either in terms of units or sales rupees, at which the firm breaks even, *i.e.*, neither makes profit nor loss. *In other words, it is the zero profit point. No firm plans to* operate at zero profit point. But a knowledge of this point is vital to the management and provides the necessary insight to the management in the matter of planning the profit of the enterprise.

We shall recall the marginal costing equation which we have discussed earlier.

$$S-V = F+P$$

Since at break-even point profit (P) is equal to zero,

$$S-V = F$$

or

$$C = F$$

In other [illegible] products must equal fixed exp[illegible] [illegible]ed expenses the enterprise mak[illegible] [illegible]bution is short of fixed expenses it results in loss. This knowledge is basic to all further study on this topic.

Calculation of Break-even point (B.E.P.) There are different ways of calculating B.E.P. These can be better understood by working out a simplified illustration.

Illustration 2. Ram manufactures shampoo which he fills in a standard size pack for marketing. The following are the details.

Selling price	Rs. 20
Variable costs	Rs. 12
Monthly fixed expenses :	
Rent	Rs. 8,000
Salaries	Rs. 7,000
Others	Rs. 5,000
	Rs. 20,000

Calculate (1) the number of bottles he should sell in order to break even and (2) the sales in rupees required in order to break even.

The problem can be solved in three ways. We shall illustrate all the methods.

1. **Contribution approach.** This is a common-sense approach. As we see from the data given each bottle of shampoo gives a contribution of Rs. 20—Rs. 12= Rs. 8. The total contribution required to break even is the sum of fixed expenses, *viz.*, Rs. 20,000.

Number of packs to be sold = 20,000/ Rs. 8 = 2,500

B.E. sales (in rupees) = 2,500 × Rs. 20 = Rs. 50,000

2. **Profit-volume ratio.** This is a very important tool which we will be making use of frequently and expresses the relationship of contribution to sales. Stated precisely, it is the ratio of contribution to sales. Symbolically,

P/V ratio = C/S

Since C = S−V, it can also be stated as

$$\frac{S-V}{S}$$

In the given case P/V ratio works out to Rs. 8/Rs. 20 or simply 2/5. What does it mean? It means that for every Rs. 5 of sales there will be contribution of Rs. 2. Therefore given the sales and given the P/V ratio one can easily find out the total contribution. Expressed in formula,

Contribution = Sales × P/V ratio

From the above it also follows that required sales for a given contribution can be calculated by the formula

$$\text{(Required) sales} = \frac{\text{(Target) contribution}}{\text{P/V ratio}}$$

As we have already stated, for the zero profit point the target contribution must equal fixed expenses. So we can rewrite the formula as

$$\text{B.E.P. (sales)} = \frac{\text{Fixed expenses}}{\text{P/V ratio}}$$

Now applying the data given in the illustration

$$\text{P/V ratio-}\frac{S-V}{S} = \frac{\text{Rs. }20-\text{Rs. }12}{\text{Rs. }20} = \frac{8}{20} \text{ or } \frac{2}{5}$$

$$\therefore \text{ B.E.P. Sales (in Rs.)} = \frac{\text{Rs. }20{,}000}{2/5} \text{ or } \frac{20{,}000 \times 5}{2}$$

$$= \text{Rs. }50{,}000$$

Check. For sales of Rs. 50,000 the total contribution will be Rs. 50,000 × 2/5= Rs. 20,000. Since Rs. 20,000 is just equal to fixed expenses, this represents the zero-profit point. This method, however, cannot be applied to determine the B.E.P. in terms of units.

3. **Equation technique.** *The problem can also be solved by using* the marginal costing equation S $-$ V $=$ F $+$ P or S $=$ P$+$F$+$V

Let X be the number of units to be sold to break even. Then,

Rs. $20X =$ Rs. $12X +$ Rs. $20{,}000 + 0$

Rs. $8X =$ Rs. $20{,}000$

$$X = \text{Rs. } \frac{20{,}000}{8} = 2{,}500 \text{ units}$$

B.E.P. in terms of sales (rupees) can be obtained by expressing the variable costs as a *percentage or ratio of sales. In the given illustration* costs work out to 60% or 0·6 of sales.

Let X be sales in rupees needed to break even.

$X = 0{\cdot}6 +$ Rs. $20{,}000 + 0$

$$0{\cdot}4\, X = \text{Rs. } 20{,}000 \text{ or } X = \text{Rs. } \frac{20{,}000}{0{\cdot}4} = \text{Rs. } 50{,}000$$

The student may understand that 0·4 is the same as 2/5 which is the P/V ratio.

BREAK-EVEN CHART

The break-even point can also be determined with the help of break-[illegible] of cost volume-[illegible] activity either in units or as a percentage of normal operating capacity. If for example, *1,00,000 units is the normal operating capacity, we may take the scale on* X-axis as 1" = 10,000 units or 1" = 10% of activity level. On Y-axis are shown fixed costs, variable costs, total cost and sales. The break-even chart may be drawn in any of the two ways shown below.

First method

(*a*) As the sales and cost lines are straight lines (assumed) we require at least one point to draw these lines. *Let us assume a sales* volume of 4,000 units and plot the point for sales at 4,000 $\times$ Rs. 20, *i.e.*, Rs. 80,000. The sales revenue line starts from the origin as a straight upward sloping line.

(*b*) Draw the fixed cost line at Rs. 20,000 and this will be parallel to vertical axis.

(*c*) *If sales volume is 4,000 units, the variable expenses work out* to Rs. 48,000 and the total cost will be Rs. 68,000. Plot the point for 4,000 units and Rs. 68,000. A straight line is then drawn from this point to the point at which the *fixed* cost line intercepts the vertical axis. This line represents the total cost line.

(*d*) The break-even point is the point at which the *total cost line* intersects the sales revenue line. Because at that point the total costs are equal to total sales resulting in zero-profit position. *Beyond this point sales line* is above the cost line showing the profit zone. To the left of the point the cost line is above the sales line indicating the loss zone.

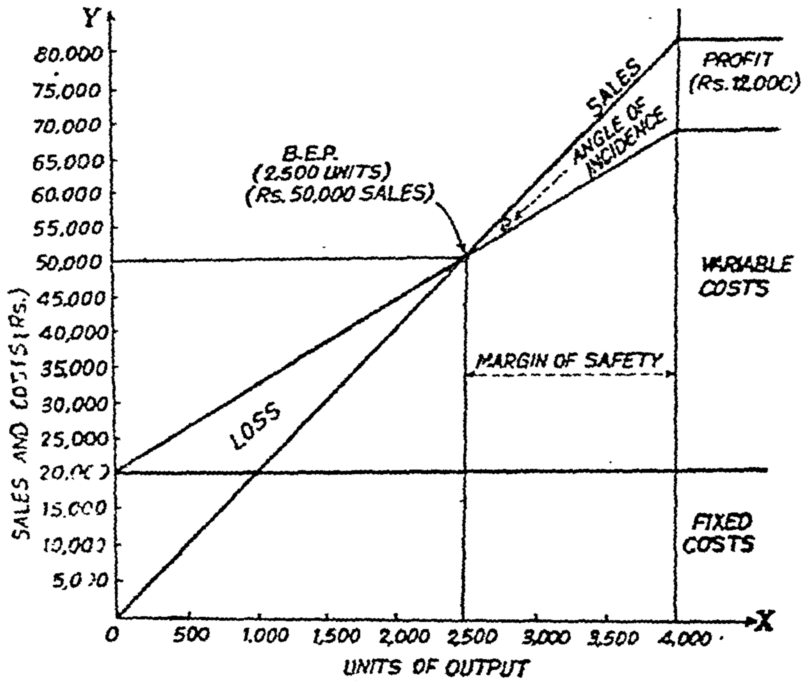
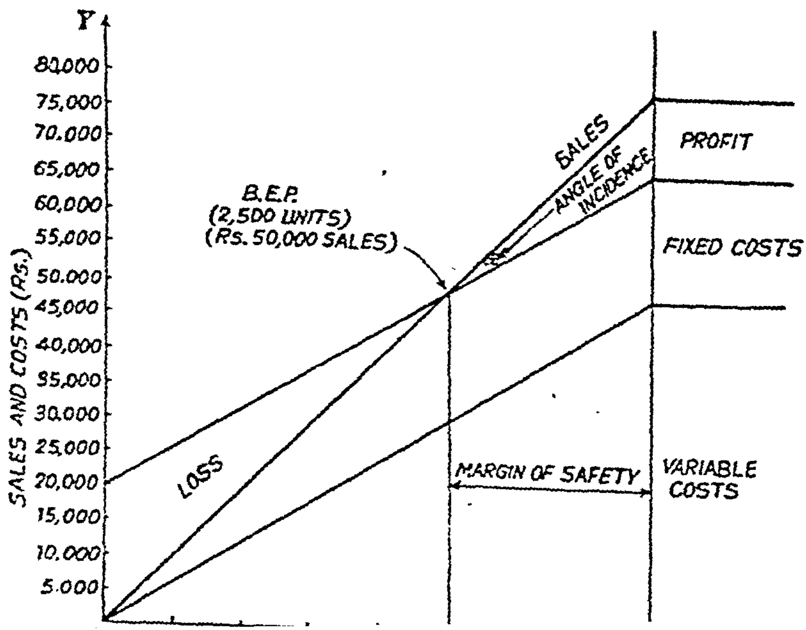


Fig. 1. Break-even chart

Second method :

In the second method, the variable costs are shown first and the fixed costs are superimposed over the variable costs to form the total cost line. The diagram will appear as under.



This chart is better than the one shown under the first method, since it clearly indicates that loss arises [illegible] is less than fixed costs. [illegible] costs are recovered. Th[illegible]

Advantages of Break-even Chart

1. From the chart one can ascertain the total cost and sales for any level of activity. The composition of total cost, *i.e.*, fixed and variable costs and the latter by elements of cost is available from the chart.

2. Since total cost and total sales are known at any level of activity, the chart helps us to ascertain the profit or loss at any level. In case of loss [illegible] that the contribution is not equal [illegible] nagement to initiate necessary contr[illegible] tool for control and reduction of costs.

3. The ascertainment of break-even point is useful to the managers as activity below that level results in loss. This indicates the lowest level to which activity can drop without endangering the position of the company. This is a useful starting point for an in-depth analysis of cost-volume-profit relationship.

4. The chart also indicates the margin of safety (M/S). It is the [illegible] n also [illegible] fixed [illegible] ess of [illegible]

$$\text{Profit} = \text{M/S} \times \text{P/V Ratio}$$

$$\therefore \text{M/S} = \frac{\text{Profit}}{\text{P/V Ratio}}$$

5. Angle of incidence is also disclosed by the break-even chart. This is the angle at which the sales line cuts the total costs line. The larger the angle the higher the profit rate. A firm having high margin of safety and also a large angle of incidence makes very high profits. Capital-intensive industries will generally have a high break-even point but possess a large angle of incidence.

Illustration 3. Two businesses A.B. Ltd. and C.D. Ltd. sell the same type of product in the same type of market. Their budgeted Profit and Loss Accounts for the year ending 1983 are as follows :

	A.B. Ltd. Rs.		C.D. Ltd.	Rs.
Sales	Rs.	1,50,000	Rs.	1,50,000
Less : Variable costs	1,20,000		1,00,000	
Fixed costs	15,000		35,000	
		1,35,000		1,35,000
Net profit budgeted		15,000		15,000

You are required to :

(*a*) Calculate the break-even point of each business ;

(*b*) Calculate the sales volume at which each of the business will earn Rs. 5,000 profit ; and

(*c*) State which business is likely to earn greater profits in conditions of :

(*i*) heavy demand for the product ;

(*ii*) low demand for the product.

Give your reasons. (*I.C.M.A. Inter.*)

Solution :

(*i*) Break-even point :

$$\text{AB Ltd : P/V Ratio} = \frac{\text{Rs. } 30{,}000}{\text{Rs. } 1{,}50{,}000} = \frac{1}{5}$$

$$\therefore \text{B.E.P.} = \frac{F}{\text{P/V Ratio}} = \frac{15{,}000}{1/5} = \frac{\text{Rs. } 15{,}000 \times 5}{1} = \text{Rs. } 75{,}000$$

$$\text{CD Ltd : P/V Ratio} = \frac{\text{Rs. } 50{,}000}{\text{Rs. } 1{,}50{,}000} = \frac{1}{3}$$

$$\therefore \text{B.E.P.} = \frac{F}{\text{P/V Ratio}} = \frac{35{,}000}{1/3} = \frac{35000 \times 3}{1} = \text{Rs. } 1{,}05{,}000$$

(*ii*) Required sales volume to earn a profit of Rs. 5,000 : This can be ascertained in each case by calculating the required contribution and dividing the same by P/V Ratio. Required contribution is fixed expenses plus profit. (In case of loss it has to be subtracted).

AB Ltd : Required contribution = Rs. 15,000+Rs. 5,000 = Rs. 20,000

$$\therefore \text{Sales required} = \frac{\text{Rs. } 20{,}000}{1/5} = \text{Rs. } 1{,}00{,}000$$

CD Ltd : Required contribution = Rs. 35,000+Rs. 5,000 = Rs. 40,000

$$\therefore \text{Sales required} = \frac{\text{Rs. } 40{,}000}{1/3} = \text{Rs. } 1{,}20{,}000$$

(*iii*) During conditions of heavy demand company CD Ltd. is likely to make higher profits, than AB Ltd. Although it has a higher B.E.P. it has a very favourable angle of incidence. Its P/V Ratio is 1/3 which means for every sales of Rs. 3, there will be a contribution of Re. 1. During a period of low demand, company AB Ltd. is likely to make higher profits as it has a lower B.E.P. due to smaller amount of fixed expenses.

Limitations of Break-Even Charts

(1) Break-even chart is drawn on the assumption that all production is sold. In reality one has to reckon with building up and running down of stocks.

(2) The chart is drawn on the assumption that fixed costs remain the same at all levels of activity. This again is not true. May be for changes within ± 20 per cent change of activity the assumption will hold good, but not beyond that range.

(3) Linear relationship is assumed between sales and units sold on one hand and variable costs and units produced on the other. In reality selling prices change when more output has to be sold. Likewise,

variable costs may not always vary proportionately. In the absence of linear behaviour between cost and sales there may be two or more break-even points as shown in the diagram below.

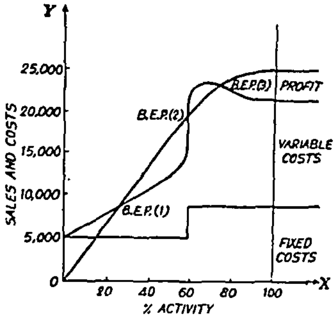
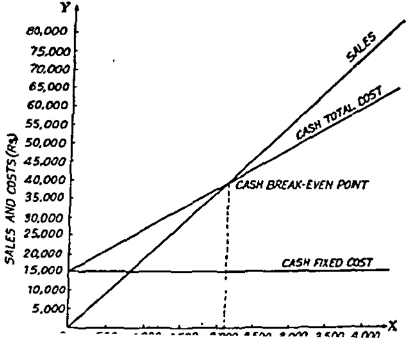


Fig. 3 Break-even chart

(4) Break-even chart holds good only for the set of data given. More charts should be drawn if one wants to understand the effect of change in selling price and/or costs.



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(*ii*) Required sales volume to earn a profit of Rs. 5,000 : This can be ascertained in each case by calculating the required contribution and dividing the same by P/V Ratio. Required contribution is fixed expenses plus profit. (In case of loss it has to be subtracted).

AB Ltd : Required contribution = Rs. 15,000+Rs. 5,000 = Rs. 20,000

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CD Ltd : Required contribution = Rs. 35,000+Rs. 5,000 = Rs. 40,000

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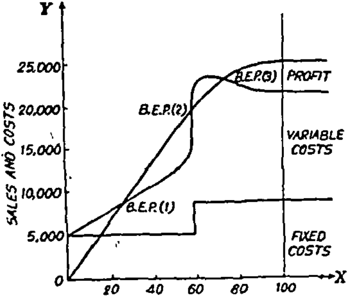

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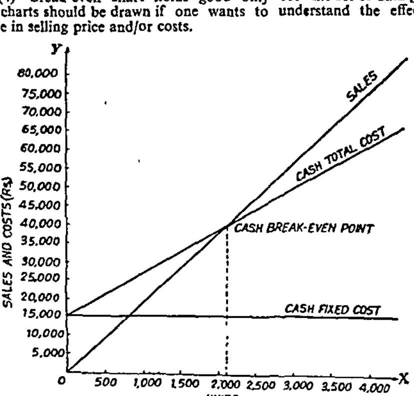

(5) Break-even chart is not the sole method of presenting cost-volume-profit relationship. It can be presented in the form of a statement and sometimes for decision-making comparative statements of different alternatives are more helpful than the charts.

VARIATION OF BREAK-EVEN CHARTS

(*i*) **Cash break-even chart.** This chart helps the management to know the point at which cash breaks even, *i.e.*, the point at which cash inflows from sales are sufficient to cover all costs requiring cash payments. This chart does not take into account fixed costs which do not result in cash outgo like depreciation and deferred expenses. The chart is drawn in the usual way by taking into account cash fixed cost and cash total cost. The diagram is given on page FSA-347.

(*ii*) **Analytical Break-even chart.** In this chart the variable costs are split by elements and likewise profit wedge is split into the different appropriations. Such a break-even chart is helpful for managerial analysis.

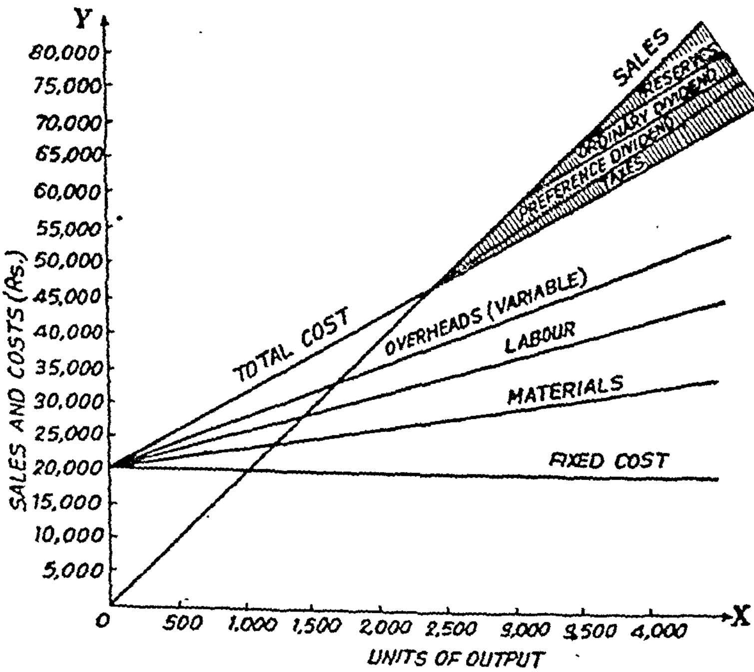

Fig. 5. Analytical Break-even Chart

(*iii*) **Multiple Product Break-even Chart.** This is a chart draw when the firm is producing more than one product. The following a the steps involved in drawing such a chart.

(*a*) Plot the fixed cost line first.

(*b*) Plot the contribution of the product with the highest P/V rat upon its normal level of sales, followed by other products in that orde The contribution is cumulated for this purpose.

(c) The origin is then connected to the end of the line last plotted. The line so drawn represents the average contribution slope. The point at which this average line intersects the fixed cost line represents the B.E.P.

Illustration 4. The budget of Graphics Ltd. includes the following data for the forthcoming financial year.

(a)	Fixed expenses	Rs. 50,000
(b)	Contribution per unit—	
	Product A	Rs. 5
	Product B	Rs. 4
	Product C	Rs. 4
(c)	Sales forecast	
	Product A 2,000 units at Rs. 10 each	
	Product B 10,000 units at Rs. 10 each	
	Product C 5,000 units at Rs. 20 each	

You are required to draw a multiple product break-even chart after calculating the respective P/V Ratios.

Solution

Product	*Sales*	*P/V Ratio*	*Contribution*	*Cumulative*
A	20,000	50%	10,000	10,000
B	1,00,000	40%	40,000	50,000
C	1,00,000	20%	20,000	70,000

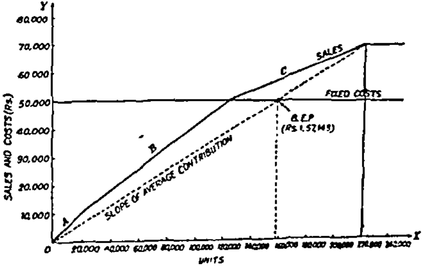

Fig. 6. Multiple product Break-even chart

Profit-Volume graph Contribution Sales graph. This is a simplified form of break-even chart. In the break-even chart one cannot ascertain profit directly and for this purpose one has to measure the gap between cost and sales lines. This difficulty is overcome by plotting the profit directly against activity. At nil activity the loss is equal to fixed expenses. At B.E.P. profit is equal to zero. With these two points the profit line can be drawn. Alternatively, another point can be plotted at a given level. Taking the data in Illustration 2, the following profit graph can be drawn.

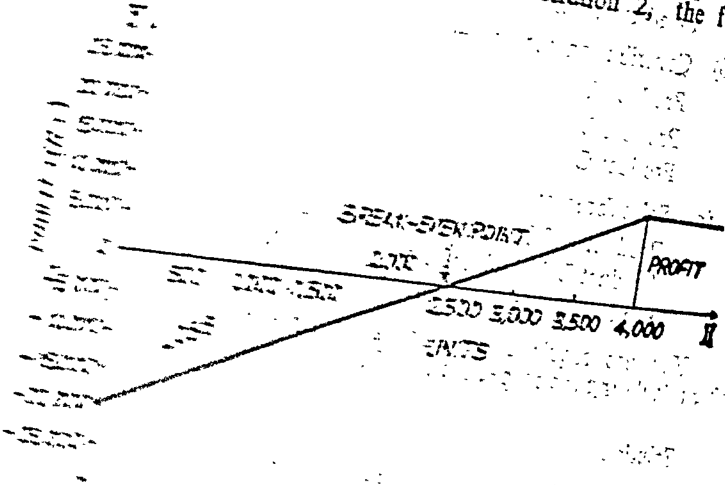

Fig. 7. Profit-volume Graph

Profit-volume graph can also be drawn for multiple products and for the data given in Illustration 4, the profits graph is shown below.

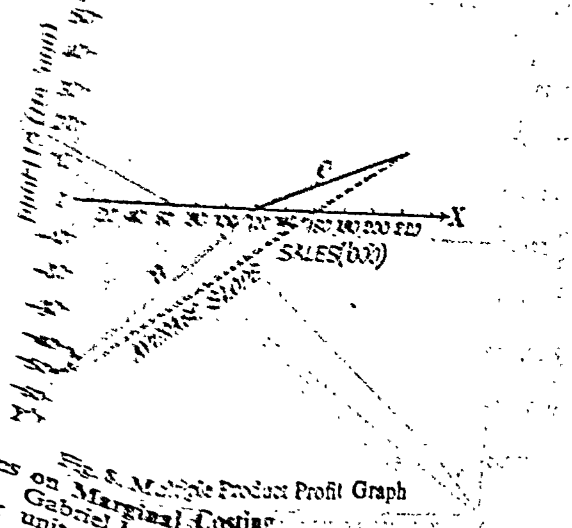

Fig. 8. Multiple Product Profit Graph

General Illustrations on Marginal Costing

Illustration 5. Gabriel Ltd. manufactures a single product which sells at Rs. 20 per unit. Existing plant has a maximum capacity of

20,000 units per annum at which level net profit is Rs. 1·50 per unit and the P/V Ratio is 20%. New plant is to be purchased having a maximum capacity of 30,000 units per annum, but which will result in fixed costs being increased by Rs. 15,000 per annum. Variable costs will be reduced by Rs. 4 per unit and to achieve increased sales, the selling price is also to be reduced by Rs. 4 per unit.

Required:

1. Calculate the revised P/V ratio as a result of the purchase of *the new plant.*

2. Calculate the number of units which would *require to be* produced using the new plant, to give a 50% increase *in profit compared* with maximum production using the old plant.

Solution :

(*i*) Revised P/V Ratio :

Sales at existing plant capacity = 20,000 × Rs. 20 = 4,00,000

Contribution	= Sales × P/V Ratio	
	= Rs. 4,00,000 × 20%	= Rs. 80,000
Profit on sales	= 20,000 × Rs. 1·50	= Rs. 30,000
Fixed expenses (Current)		Rs. 50,000

Variable cost per unit	= Sale Price − Contribution
	= 80% of sale price
	= Rs. 16.
Revised sales price	= Rs. 20 − Rs. 4 = Rs. 16
Revised variable cost	= Rs. 16 − Rs. 4 = Rs. 12
∴ Revised P/V Ratio	= C/S = 4/16 = 25%

(*ii*) *Sales required to increase current profit by 50%* :

Current profit	= *Rs. 30,000*
Add : 50% increase desired	= *Rs. 15,000*
Required profit	Rs. *45,000*
Add : Fixed expenses (Rs. 50,000 + Rs. 15,000)	Rs. *65,000*
Required (or target) Contribution	1,10,000

$$\text{Required Sales} = \frac{\text{Required Contribution}}{\text{Revised P/V Ratio}} = \frac{\text{Rs. } 1{,}10{,}000}{1/4}$$

$$= \text{Rs. } 4{,}40{,}000$$

Illustration 6.

Given :

Period 1 Sales Rs. 30,000 ; Profit 8,000

2 Sales Rs. 38,000 ; Profit 23,000

Calculate :

(*a*) the C/S ratio ;

(*b*) the profit when sales are Rs. 24,000

(*c*) the sales required to earn a profit of Rs. 4,000.

Solution :

(*a*) As in period 1 there is already profit, the additional contribution arising from additional sales results in increase of profit. Therefore the increase in profit may be taken as additional contribution.

Additional contribution = Rs. 2,300—Rs. 800 = Rs. 1,500

Additional sales = Rs. 38,000—Rs. 30,000 = Rs. 8,000

$$\therefore \text{ C/S Ratio} = \frac{\text{Rs. } 1{,}500}{\text{Rs. } 8{,}000} = \frac{3}{16} = \text{ or } 18{\cdot}75\%$$

(*b*) Taking period 1, the contribution made

= Rs. 30,000 × 3/16 = Rs. 5,625.

Fixed expenses = C—P

= Rs. 5,625—Rs. 800 = Rs. 4,825

When sales are = Rs. 24,000

Contribution will be Rs. 24,000 × 3/16 = Rs. 4,500.

Profit = C—F = Rs. 4,500—Rs. 4,825 = — Rs. 325. (loss)

As the contribution is less than fixed expenses by Rs. 325, the firm incurs a loss of Rs. 325 when sales are Rs. 24,000.

(*c*) To earn a profit of Rs. 4,000

Required contribution = Profit + Fixed Cost = Rs. 4,000 + Rs. 4,825

= Rs. 8,825

$$\text{Required Sales} = \frac{\text{Required Contribution}}{\text{P/V Ratio}}$$

= Rs. 8,825 × 16/3 = Rs. 47,067.

Illustration 7. (*a*) Alcos Ltd. manufacture and sell four types of products under the names *A, B, C* and *D*. The sales mix in value comprises 33-1/3%, 41-2/3%, 16-2/3% and 8-1/3% of products *A, B, C* and *D* respectively. The total budgeted sales (100%) are Rs. 60,000 per month.

Operating costs are :

Variable Costs :

Product *A*	60% of selling price
Product *B*	68% of selling price
Product *C*	80% of selling price
Product *D*	40% of selling price

Fixed Cost—Rs. 14,700 per month.

Calculate the break-even point for the products on an overall basis.

(*b*) It has been proposed to change the sales mix as follows, the total sales per month remaining Rs. 60,000.

Product *A*	25%
Product *B*	40%
Product *C*	30%
Product *D*	5%

Assuming that the proposal is implemented, calculate the break-even point and state the main factor, which contributed to the shift in the break-even point to the new position.

(*c*) Illustrate the effect of the above change in product mix on a simple profit-volume chart. [*I.C.W.A (Final) India*]

Solution

(*a*) *Product*	*Sales (%)* Rs.	*Variable Cost* Rs.	*Contribution* Rs.
A	20,000(33-1/3	12,000	8,000
B	25,000(41-2/3)	17,000	8,000
C	10,000(16-2/3)	8,000	2,000
D	5,000(8-1/3)	2,000	3,000
Total	60,000	39,000	21,000

$$\text{B.E.P. (On overall basis)} = \frac{\text{Rs. } 14{,}700}{21/60} = \text{Rs. } 42{,}000$$

(*b*)

Product	*Sales (%)* Rs.	*Variable Cost* Rs.	*Contribution* Rs.
A	15,000 (25)	9,000	6,000
B	24,000 (40)	16,320	7,680
C	18,000 (30)	14,400	3,600
D	3,000 (5)	1,200	1,800
	60,000	40,920	19,080

$$\text{B.E.P. (on overall basis)} = \frac{\text{Rs. } 14{,}700}{318/1000} = \text{Rs } 46{,}223.$$

There is an increase in the B.E.P. level because of relatively lesser share of products *A*, *B* and *D* with a higher P/V ratio and greater share for the product C which has a lower P/V ratio, in the revised sale-mix.

The student is advised to attempt the bit (*C*).

APPLICATIONS OF MARGINAL COSTING

1. Profit Planning

In Profit planning an enterprise decides to have a particular level of profit and explores the various alteratives to achieve the planned profit.

The various alternatives are reduction in fixed and variable costs, increase in sale price and/or sales volume, etc. In profit planning the management may have to contend with certain constraints such as the operating capacity, sales price because of competition, etc. Given the constraints, the management must explore the other alternatives to achieve the desired level of profit.

Illustration 8. ABC Ltd. manufactures a single product for which demand exists for additional quantity. Present sale of Rs. 60,000 per month utilises only 60% capacity of the plant. Sales manager assures that with a reduction of 10% in the price he would be in a position to increase the sale by about 25% to 30%.

The following data are available

(*a*) Selling price Rs. 10 per unit

(*b*) Variable cost Rs. 3 per unit

(*c*) Semi-variable cost Rs. 6,000 fixed plus Rs. 0·50 per unit

(*d*) Fixed cost Rs. 20,000 at present level estimated to be Rs. 24,000 at 80% output.

Determine the percentage increase in output which will be required *to maintain present profit margin at the proposed selling price.*

(I.C.W.A. Final Dec. 1980 Modified)

Solution

(*i*) Current operating profit :

		Rs.
Sales : 6,000 units @ Rs. 10 each		60,000
Less: Variable Cost	18,000	
Variable element of semi-variable costs	3,000	21,000
Contribution margin		39,000
Less : Fixed element of semi-variable cost	6,000	
Fixed Cost	20,000	26,000
Operating profit		13,000

(*ii*) Using the marginal cost equation

$$S - V - F = P \text{ or}$$

$$S = V + F + P,$$ the problem can be solved.

Let X be the number of units produced and sold at the proposed selling price of Rs. 9 per unit to maintain the present level of profit of Rs. 13,000.

Then $9X = 3{\cdot}5X + 26{,}000 + 13{,}000$

$\therefore \quad 5{\cdot}5X = 39{,}000$ or $X = 7091$ units.

Percentage increase in the present output $= \dfrac{7091-6000}{6000} \times 100 = 18{\cdot}18$

Illustration 9. Modern Traders are contemplating a reduction of price on their products by 10%. The following are the particulars.

	Rs.
Sales (20,000 units)	4,00,000
Fixed costs	80,000
Variable costs	15 per unit

It is also understood that by the use of machinery the variable costs will go down to Rs. 14 even though the fixed expenses will go up to Rs. 1,00,000.

How many units should be sold in order to maintain the same level of profit.

(C.A. Final, November 1981 Modified)

Solution

(*i*) Operating income at current price :

	Rs.
Sales : 20,000 units @ Rs. 20 each	4,00,000
Variable cost @ Rs. 15 per unit	3,00,000
Contribution margin	1,00,000
Less : Fixed expenses	80,000
Operating income	20,000

(*ii*) Revised profit-volume ratio :

$$\frac{S - V}{S} = \frac{\text{Rs. } 18 - \text{Rs. } 14}{\text{Rs. } 18} = \frac{4}{18} \text{ or } \frac{2}{9}$$

Required contribution $= F + P$

= Rs. 1,00,000 + Rs. 20,000

= Rs. 1,20,000

$$\text{Required sales} = \frac{\text{Rs. } 1{,}20{,}000}{2/9} = \text{Rs. } 5{,}40{,}000$$

$$\text{Number of units} = \frac{\text{Rs. } 5{,}40{,}000}{18} = 30{,}000 \text{ units}$$

$\therefore$ 30,000 units must be sold in order to maintain the same level of profit at reduced price.

Target profit net of tax. In problems, sometimes the student is asked to compute the sales required to earn a particular level of profit after tax. In such cases profits must be divided by (1 − income tax rate) to arrive at the pre-tax profits. For example, if a company desires to have an after-tax profit of Rs. 1,00,000 and the tax rate is 50%, then the pre-tax profits will be

$$\frac{\text{Rs. } 1{,}00{,}000}{50} \times 100 = \text{Rs. } 2{,}00{,}000$$

So in such problems the target contribution will be

Fixed costs + After-tax profits (1—income tax rate). To calculate the required sales, the following formula will be employed.

$$\text{Required sales} = \frac{\text{Fixed costs} + \text{After-tax profit}/1 - \text{Tax rate}}{\text{P/V ratio}}$$

Illustration 10. A company plans to earn a profit of Rs. 15 lakhs after tax and the tax rate is 60 per cent. The fixed costs are Rs. 30 lakhs. If the P/V ratio of the company is 25%, calculate the required sales.

Solution :

$$\text{Required sales} = \frac{\text{Fixed costs} + \text{After-tax profit}/1 - \text{Tax rate}}{\text{P/V ratio}}$$

$$= \frac{\text{Rs. } 30,00,000 + \dfrac{\text{Rs. } 15,00,000}{40} \times 100}{1/4}$$

$$= \frac{\text{Rs. } 30,00,000 + \text{Rs. } 37,50,000}{1} \times 4$$

$$= \text{Rs. } 2,70,00,000.$$

2. Key Factors in Production

A key factor is one which is a limiting factor and in short supply. It may be raw material, labour or a particular machine. Normally when management has to decide the priority for products to be produced, it is guided by the P/V ratio. But this may be misleading if it uses more units of key factor than other products. In such cases the decision must be based on the contribution per unit of key factor, to maximize the profit.

Illustration 11. Your company can produce three products *A*, *B* and *C* from the same manufacturing facilities. The cost and other details of the three products are :

	A	*B*	*C*
	Rs.	Rs.	Rs.
Selling price/unit	100	80	50
Variable cost/unit	60	60	20
Maximum production per month : units	5,000	8,000	6,000
Total hours available	200 per month		
Maximum demand per month : units	2,000	4,000	2,400

The processing hours cannot be increased beyond 200 hours per month.

Advise the management on the most profitable product-mix.

Solution :

STATEMENT SHOWING PROFITABILITY
PER UNIT OF KEY FACTOR

	Products		
	A	*B*	*C*
	Rs.	Rs.	Rs.
Sale price	100	80	50
Marginal cost	60	60	20
Contribution per unit	40	20	30
P/V ratio	2/5	1/4	3/5
Maximum production per hour	5,000	8,000	6,000
	200	200	200
	25 units	40 units	30 units
Contribution per hour	25 × 40	40 × 20	30 × 30
	= Rs. 1000	= Rs. 800	= Rs. 900
Ranking according to P/V Ratio	II	III	I
Ranking according to Contribution per unit of key factor	I	III	II

Therefore the most profitable product mix :

Product *units*	*Hours utilised*	*Contribution Rs.*
A = 2,000 units × Rs. 40	80	80,000
C = 2,400 units × Rs. 30	80	72,000
B = 1,600 units × Rs. 20	40	32,000
	200	1,84,000

Tutorial Note :

If the priorities are determined on the basis of P/V Ratio, the contribution will be less than Rs. 1,84,000

3. Acceptance of a special Contract

Sometimes an enterprise may receive an offer to buy in bulk, but at a price less than the total cost. Such an offer may be accepted, provided the price offered is more than marginal cost and the execution of the [illegible]

[illegible] to shut down production for the reason prices are below total cost. It is better to produce and sell, if the price prevailing is more than marginal

cost. In that event the enterprise will be recovering some of the fixed costs and thus minimise losses, although they cannot be eliminated. Selling at or even below marginal cost during short periods may become necessary in the following situations :

(1) There are certain industries which must be continuously run due to technical reasons. If such industries are shut down, the enterprise has to incur heavy expenditure to start production process again. So production must be kept going even if prices are not remunerative.

(2) To introduce new products or to popularise an existing product.

(3) To sell other products in combination and when such other products have high profit margin.

(4) To dispose of goods which are perishable.

Illustration 12. A company manufactures a product which costs :

	Rs.
Fixed per month	1,00,000
Variable per unit	10

The current sales are 10.000 units per month at Rs. 30 per unit.

(*i*) It is proposed to sell in a foreign market where demand for an additional 5,000 units per month is expected at an additional shipping cost including duties amounting to Rs. 12 per unit.

(*ii*) A domestic store has offered to take 5,000 units per month at Rs. 18 per unit. Should this order be accepted in lieu of the foreign offer ?

(*iii*) It is proposed to reduce the selling price to increase sales. The sales volume at various levels are estimated to be—

10,000 per month — Rs. 30/- per unit
14,000 per month — Rs. 25/- per unit
19,000 per month — Rs. 20/- per unit

Should the prices be reduced ? What will be the effect of reduction on the rate of profit on sales ?

Solution :

(*a*)

	Without special order 10,000 units Rs.	*With special order 15,000 units* Rs.	*Special order difference 5,000 units* Rs.
Sales	3,00,000	4,50,000	1,50,000
Less : Marginal cost	1,00,000	1,50,000	50,000
	2,00,000	3,00,000	1,00,000
Less : Additional Shipping costs duties etc.	Nil	60,000	60,000
Contribution margin	2,00,000	2,40,000	40,000
Less : Fixed costs	1,00,000	1,00,000	Nil
Net Operating Profit	1,00,000	1,40,000	40,000

(b)	*Without the order of Domestic Store 10,000 units*	*With the order of Domestic store 15,000 units*	*Difference 5,000 units*
	Rs.	Rs.	Rs.
Sales	3,00,000	3,90,000	90,000
Less : Marginal cost	1,00,000	1,50,000	50,000
Contribution margin	2,00,000	2,40,000	40,000
Less : Fixed expenses	1,00,000	1,00,000	Nil
Net operating profit	1,00,000	1,40,000	40,000

This order also yields the same profit as the order from foreign market. However, it is advisable to accept the foreign order, since sale to domestic store may depress the prices within the local market.

(c)	*Sale of 10,000 units*	*Sale of 14,000 units*	*Sale of 19,000 units*
	Rs.	Rs.	Rs.
Sale price	30	25	20
Sales	*3,00,000*	*3,50,000*	*3,80,000*
Less : Marginal cost	1,00,000	1,40,000	1,90,000
Contribution margin	2,00,000	2,10,000	1,90,000
Less : Fixed costs	1,00,000	1,00,000	1,00,000
	1,00,000	1,10,000	90,000

It is better to sell the product at Rs. 25 per unit and increase the sales to 14,000 units as it results in an increase in the profit by Rs. 10,000.

Illustration 13. A Typewriter manufacturing company uses a part RQ 346 in its assembly. Annual usage is 4,80,000 units. Currently this [illegible]

[illegible]

and inventory carryi [illegible]

department whether [illegible]

Solution :

The management has to take the decision on the basis of the relevant costs. There is no need to take into account the costs that are common.

	Without Price Reduction Rs.	*With price Reduction* Rs.	*Difference* Rs.
Cost of components	5,04,000	4,80,000	(24,000)
Ordering costs	420	140	(280)
Storage space costs	—	10,000	10,000
Carrying costs	4,200 (1)	12,000 (2)	7,800
		Net savings in costs	(6,480)

It is profitable to accept the reduced price offer.

Tutorial Notes :

(1) When the ordering quantity is 40,000 units the average quantity in stock will be $\frac{40,000 + 0}{2} = 20,000$ units

Carrying Cost $= 20,000 \times$ Re. 1·05 $\times 20/100 =$ Rs. 4,200

(2) $60,000 \times$ Re. $1 \times 20/100 =$ Rs. 12,000.

(4) **Make - or - buy decisions.** Management is often faced with the problem whether to make a component or buy from outside. The relevant costs for manufacturing the component are the marginal costs. If the marginal cost of making the component is Rs. 10, and the supplier is making it available at Rs. 12, then for every component manufactured internally there will be a saving of Rs. 2. This, of course, is subject to the condition that spare capacity is available, and there will be no increase in the fixed costs. If fixed costs are also to be incurred then they too must be considered in taking a decision. The making of the component should not be at the expense of some other uses of the facility. If it is so then the contribution from such alternative use will be lost. In such a case the contribution forgone must be added to the marginal cost of the component.

Illustration 14. Southern Motors Ltd., manufactures automobile parts. The following are the costs of making a component SSB 999.

	Total Cost for 1,00,000 units Rs.	*Cost per unit* Rs.
Direct Material	5,00,000	5
Direct Labour	8,00,000	8
Variable Factory Overhead	6,00,000	6
Fixed Factory Overhead	5,00,000	5
	24,00,000	24

Another manufacturer has offered to sell the same part to Southern [illegible]

Required: Should the part be made or bought (1) if the facility released because of 'buy' will remain idle and (2) the released facilities can be rented to another manufacturer for Rs. 50,000.

Solution :

	Make	*Buy and leave facilities idle*	*Buy and rent*
Rent Revenue	—	—	50,000
Cost of Parts (Make or buy)	(24,00,000)	(22,00,000)	(22,00,000)
Saving in Supervisors' Salaries		1,50,000	1,50,000
Net relevant costs	(24,00,000)	(20,50,000)	(20,00,000)

The analysis indicates that the most advantageous course is to buy the component and rent out the facilities.

Marginal Costs—Advantages

(1) Marginal costing facilitates management in their task of profit-planning, as it helps them have a good insight into cost-volume-profit relationship. Having regard to market factors they can determine the level of activity at which they can optimize the profit.

(2) [illegible] scarce factors like raw material, labour hours or [illegible]

(3) Many managerial decisions like make or buy, sell or process further, accepting special contract, replacement of equipment are taken by employing the marginal costing technique.

(4) *Questions regarding manual or machine methods of production,* employing automatic or semi-automatic machines can again be decided with the help of marginal costing technique.

(5) *Fixation of selling prices during special situations is possible* only with the help of marginal costing technique.

(6) [illegible] and by not [illegible] Marginal [illegible] ing fixed overhead.

(7) As fixed costs are excluded the question of under or over-absorption of those overheads does not arise.

Solution :

The management has to take the decision on the basis of the relevant costs. There is no need to take into account the costs that are common.

	Without Price Reduction *Rs.*	*With price Reduction* *Rs.*	*Difference* *Rs.*
Cost of components	5,04,000	4,80,000	(24,000)
Ordering costs	420	140	(280)
Storage space costs	—	10,000	10,000
Carrying costs	4,200 (1)	12,000 (2)	7,800
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It is profitable to accept the reduced price offer.

Tutorial Notes :

(1) When the ordering quantity is 40,000 units the average quantity in stock will be $\frac{40,000 + 0}{2} = 20,000$ units

Carrying Cost = 20,000 × Re. 1·05 × 20/100=Rs. 4,200

(2) 60,000 × Re. 1 × 20/100 = Rs. 12,000.

(4) **Make - or - buy decisions.** Management is often faced with the problem whether to make a component or buy from outside. The relevant costs for manufacturing the component are the marginal costs. If the marginal cost of making the component is Rs. 10, and the supplier is making it available at Rs. 12, then for every component manufactured internally there will be a saving of Rs. 2. This, of course, is subject to the condition that spare capacity is available, and there will be no increase in the fixed costs. If fixed costs are also to be incurred then they too must be considered in taking a decision. The making of the component should not be at the expense of some other uses of the facility. If it is so then the contribution from such alternative use will be lost. In such a case the contribution forgone must be added to the marginal cost of the component.

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	Total Cost for 1,00,000 units Rs.	*Cost per unit* Rs.
Direct Material	5,00,000	5
Direct Labour	8,00,000	8
Variable Factory Overhead	6,00,000	6
Fixed Factory Overhead	5,00,000	5
	24,00,000	24

Another manufacturer has offered to sell the same part to Southern Motors for Rs. 22 each. All of the fixed overhead would continue to be incurred even if the component is purchased from outside except the costs of Rs. 1,50,000 pertaining to supervisory personnel which could be avoided.

Required: Should the part be made or bought (1) if the facility released because of 'buy' will remain idle and (2) the released facilities can be rented to another manufacturer for Rs. 50,000.

Solution:

	Make	*Buy and leave facilities idle*	*Buy and rent*
Rent Revenue	—	—	50,000
Cost of Parts (Make or buy)	(24,00,000)	(22,00,000)	(22,00,000)
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(1) Marginal costing facilitates management in their task of profit-planning, as it helps them have a good insight into cost-volume-profit relationship. Having regard to market factors they can determine the level of activity at which they can optimize the profit.

(2) When there are scarce factors like raw material, labour hours or machine hours, marginal costing helps the management to establish correct priorities and derive the maximum contribution per unit of scarce factor. Thus marginal costing helps the management to determine the product mix that can maximize the profit and facilitate continuous review in the light of changing conditions.

(3) Many managerial decisions like make or buy, sell or process further, accepting special contract, replacement of equipment are taken by employing the marginal costing technique.

(4) Questions regarding manual or machine methods of production, employing automatic or semi-automatic machines can again be decided with the help of marginal costing technique.

(5) Fixation of selling prices during special situations is possible only with the help of marginal costing technique.

(6) By charging the fixed costs against contribution and by not charging them to cost units, fluctuation in unit costs are avoided. Marginal costing also results in realistic inventory valuations by excluding fixed overhead.

(7) As fixed costs are excluded the question of under or over-absorption of those overheads does not arise.

Solution :

The management has to take the decision on the basis of the relevant costs. There is no need to take into account the costs that are common.

	Without Price Reduction Rs.	*With price Reduction* Rs.	*Difference* Rs.
Cost of components	5,04,000	4,80,000	(24,000)
Ordering costs	420	140	(280)
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Carrying costs	4,200 (1)	12,000 (2)	7,800
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Tutorial Notes :

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Carrying Cost = 20,000 × Re. 1·05 × 20/100 = Rs. 4,200

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Direct Material	5,00,000	5
Direct Labour	8,00,000	8
Variable Factory Overhead	6,00,000	6
Fixed Factory Overhead	5,00,000	5
	24,00,000	24

(*iii*) Draw a Break-even Chart.

Sales price	Rs. 20 per unit
Variable manufacturing cost	Rs. 11 per unit
Variable selling cost	Rs. 3 per unit
Fixed factory overhead	Rs. 5,40,000 per year.
Fixed selling cost	Rs. 2,55,000 per year.

(*M. Com. Pune University*)

[B.E.P. Rs. 26,40,000; units to be sold to earn a profit of Rs. 60,000 = 1,42,000]

3. Company *A* manufactures and sells a consumer product. It can produce and sell up to 3,000 units at a variable cost of Rs 1·50 per unit and fixed costs of Rs. 5,000 from 3001 to 6000 units at a variable cost of Rs. 1·00 per unit and fixed costs of Rs. 7,000 and from 6001 to 10,000 units, at a variable cost of 0·50 paise per unit and fixed cost of Re. 15,000. The president has found that 2,500 units can be sold at a price of Rs. 6·00 each, 3,000 units at a price of Rs. 4·00 each, 8,000 units probably could be sold at Rs. 3·50 per unit if advertising were increased by Rs. 1,000 and selling costs by Rs. 0·10 paise per unit. The latter costs are in addition to those already stated for the 6001—10,000 units range. How many units should company *A* plan to produce and sell 2,500, 5,000 or 8,000? (*M.B.A. Madras*)

[The company should produce and sell 5,000 units.]

4. The following figures are obtained from the records of Easy-Flow Ink Company. There will be no change in the cost-sales relationship during the coming year except as indicated.

Sales (20,00,000 bottles @ 25 p)	5,00,000
Variable costs	3,00,000
Fixed costs	1,00,000
Total costs	4,00,000
Profits before Tax	1,00,000
Income Tax	50,000
Profit after tax	50,000

You are required :

(1) To calculate the B.E.P. in sales and units.

(2) To calculate the new B E.P. if a plant expansion will add Rs. 50,000 to fixed costs and increase capacity by sixty per cent.

(3) To calculate the required sales after plant expansion for maintaining the present profits before tax.

(4) To calculate the profit if the plant operates to the full capacity.

(8) Marginal costing helps to highlight the aspects that can be controlled.

(9) It enables the management to clearly grasp the implications of alternative production and sales policies.

Disadvantages

(1) The classification of expenses into fixed and variable is a complicated job. Although certain methods have been developed to analyse semi-variable into fixed and variable, they are not satisfactory.

(2) Since variable overheads are also to be estimated the problem of over and under-recovery cannot be eliminated altogether.

(3) Over emphasis on marginal costing may sometimes lead to faulty decisions leading to under-recovery of fixed costs. In some cases it may be difficult to revise the prices later.

(4) It is difficult to apply marginal costing to concerns adopting job costing methods.

(5) With increasing automation, enterprises are going to have a higher proportion of fixed costs than variable costs. So to what extent marginal costing is suitable under the changing condition is a debatable point.

(6) Some of the advantages of marginal costing are also provided by the application of standard costing technique. For example, the effect of fluctuating output on fixed overhead is disclosed by volume variance.

Suggested Reading

(1) *Introduction to Management Accounting*—Charles Horngren
(2) *Management Accounting*—W.M. Harper
(3) *A Report on Marginal Costing* —I.C.W.A., London
(4) *Cost Accounting and Costing Methods*—Wheldon.

ASSIGNMENT MATERIAL

1. From the following particulars, find out the Break-even point.

	Rs.
Variable cost per unit	20
Selling price per unit	30
Fixed expenses	1,00,000

What will be the selling price per unit if the break-even point is brought down to 8,000 units? How many number of units are to be produced and sold to earn a profit of Rs. 12,500, when the break-even sales is 8,000 units? (*B. Com Madras University Nov. 1982*)

[B.E.P. in sales Rs. 3,00,000; units 10,000; when B.E.P. is 8,000 units, selling price is Rs. 32·50, to earn profit of Rs. 12,500, required sales 9,000 units.]

2. From the following data calculate :—
(*i*) Break-even point expressed in amount of sales in rupees
(*ii*) Number of units that must be sold to earn a profit of Rs. 60,000 per year.

(*iii*) Draw a Break-even Chart.

Sales price	Rs. 20 per unit
Variable manufacturing cost	Rs. 11 per unit
Variable selling cost	Rs. 3 per unit
Fixed factory overhead	Rs. 5,40,000 per year.
Fixed selling cost	Rs. 2,55,000 per year.

(*M. Com. Pune University*)

[B.E.P. Rs. 26,40,000; units to be sold to earn a profit of Rs. 60,000 = 1,42,000]

3. Company *A* [illegible] product. It can produce and sell up [illegible] Rs 1·50 per unit and fixed costs of [illegible] variable cost of Rs. 1·00 per unit and fixed costs of Rs. 7,000 and from 6001 to 10,000 units, at a variable cost of 0·50 paise per unit and fixed cost of Re. 15,000 [illegible] 0 units can be sold at a price of R [illegible] Rs. 4·00 each, 8,000 units probably [illegible] advertising were increased by Rs. 1,000 and selling costs by Rs. 0·10 paise per unit. The latter costs are in addition to those already stated for the 6001—10,000 units range. How many units should company *A* plan to produce and sell 2,500, 5,000 or 8,000? (*M.B.A. Madras*)

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(1) To calculate the B.E.P. in sales and units.

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(6) Some of the advantages of marginal costing are also provided by the application of standard costing technique. For example, the effect of fluctuating output on fixed overhead is disclosed by volume variance.

Suggested Reading

(1) *Introduction to Management Accounting*—Charles Horngren
(2) *Management Accounting*—W.M. Harper
(3) *A Report on Marginal Costing* —I.C.W.A., London
(4) *Cost Accounting and Costing Methods*—Wheldon.

ASSIGNMENT MATERIAL

1. From the following particulars, find out the Break-even point.

	Rs.
Variable cost per unit	20
Selling price per unit	30
Fixed expenses	1,00,000

What will be the selling price per unit if the break-even point is brought down to 8,000 units? How many number of units are to be produced and sold to earn a profit of Rs. 12,500, when the break-even sales is 8,000 units? (*B. Com Madras University Nov. 1982*)

[B.E.P. in sales Rs. 3,00,000; units 10,000; when B.E.P. is 8,000 units, selling price is Rs. 32·50, to earn profit of Rs. 12,500, required sales 9,000 units.]

2. From the following data calculate :—
(*i*) Break-even point expressed in amount of sales in rupees
(*ii*) Number of units that must be sold to earn a profit of Rs. 60,000 per year.

(*iii*) Draw a Break-even Chart.

Sales price	Rs. 20 per unit
Variable manufacturing cost	Rs. 11 per unit
Variable selling cost	Rs. 3 per unit
Fixed factory overhead	Rs. 5,40,000 per year.
Fixed selling cost	Rs. 2,55,000 per year.

(*M. Com. Pune University*)

[B.E.P. Rs. 26,40,000 ; units to be sold to earn a profit of Rs. 60,000 = 1,42,000]

3. Company *A* manufactures and sells a consumer product. It can produce and sell up to 3,000 units at a variable cost of Rs. 1·50 per unit and fixed costs of Rs. 5,000 from 3001 to 6000 units at a variable cost of Rs. 1·00 per unit and fixed costs of Rs. 7,000 and from 6001 to 10,000 units, at a variable cost of 0·50 paise per unit and fixed cost of Re. 15,000. The president has found that 2,500 units can be sold at a price of Rs. 6·00 each, 3,000 units at a price of Rs. 4 00 each, 8,000 units probably could be sold at Rs. 3·50 per unit if advertising were increased by Rs. 1,000 and selling costs by Rs. 0·10 paise per unit. The latter costs are in addition to those already stated for the 6001—10,000 units range. How many units should company *A* plan to produce and sell 2,500, 5,000 or 8,000 ? (*M.B.A. Madras*)

[The company should produce and sell 5,000 units.]

4. The following figures are obtained from the records of Easy-Flow Ink Company. There will be no change in the cost-sales relationship during the coming year except as indicated.

Sales (20,00,000 bottles @ 25 p)	5,00,000
Variable costs	3,00,000
Fixed costs	1,00,000
Total costs	4,00,000
Profits before Tax	1,00,000
Income Tax	50,000
Profit after tax	50,000

You are required :

(1) To calculate the B.E.P. in sales and units.

(2) To calculate the new B E.P. if a plant expansion will add Rs. 50,000 to fixed costs and increase capacity by sixty per cent.

(3) To calculate the required sales after plant expansion for maintaining the present profits before tax.

(4) To calculate the profit if the plant operates to the full capacity.

(5) *To calculate the number of units to be sold after expansion is* undertaken if the price is reduced to 22 paise and in order to earn the same profit plus a return of Rs. 10,000 on the new investment.

[(1) (*i*) 10,00,000 bottles (*ii*) B.E.P. sales Rs. 2,50,000 ; (2) Rs. 3,75,000, (3) Rs. 6,25,000, (4) Pre-tax profit Rs. 1,70,000, (5) Rs. 8,17,143.]

5. Calculate the effect of sales-mix from the following data by comparing the P/V ratio and the break-even point.

		Products			
		P	*Q*	*R*	*S*
		Rs.	Rs.	Rs.	Rs.
Sales		40,000	50,000	20,000	10,000
Variable cost		24,000	34,000	16,000	4,000
New sales mix		30,000	44,000	40,000	6,000
Fixed costs	Rs. 29,400				

(*I.C.W.A. Final, December 1980*)

[Because of the revised sales mix B.E.P. increases from Rs. 84,000 to Rs. 93,630]

6. The following are the details relating to the operations of a Company for a year :

	Rs.
Sales—1,00,000 units (80% capacity) @Rs. 50 each	50,00,000
Variable costs	30,00,000
Fixed costs	14,00,000
Income before taxes	6,00,000

(*a*) Find out the break-even point in terms of volume and capacity.

(*b*) Inventory is changed to LIFO basis increasing material costs by Rs. 1,00,000 and depreciation is charged on replacement cost basis thus increasing depreciation by Rs. 20,000. Find out the new break-even point at the percentage of capacity to break even.

(*c*) It is estimated that during the next year (assuming the adoption of LIFO basis and depreciation on replacement cost) variable costs increase 5% and fixed costs 10% over the amounts in (*b*) above.

Compute the break-even point and the level of capacity to be achieved if

(*i*) sale prices do not change

(*ii*) sale prices increase 5%

(*iii*) sale prices increase 10%. (*I.C.W.A. Final*)

[(*a*) 70,000 units ; 56 per cent capacity.

(*b*) 74,737 units ; 59·8 per cent capacity.

(*c*) (*i*) 89,513 units : 71·6% capacity(*ii*) 67,295 units ; 53·8%

(*iii*) 69,577 ; 55·7%]

7. The trading results of Oxfam Ltd. for the first year of business which ended on 31st December, 1981 are :

	Rs.	Rs.
Sales (at Rs. 40 per unit)		32,00,000
Less :		
Material	12,00,000	
Labour	4,80,000	
Variable overhead	2,40,000	
Fixed overhead	5,00,000	24,20,000
Profit		7,80,000

[illegible]

Rs. 40,000.

You are required to :

(*a*) Evaluate the marketing manager's proposal ; and

(*b*) Assuming the selling price was reduced, as proposed, unit variable cost remaining as in 1981, and fixed overhead increased by Rs. 40,000, calculate what quantity would need to be sold in 1982, in order to yield a profit of Rs. 10,00,000. (*C.A. Final, May 1982*)

[The marketing manager's proposal will increase net profit by Rs. 4,40,000 ; sales required to yield a profit of Rs. 10,00,000—Rs. 49,00,000]

8. A mechanical toy factory present the following information for the year 1982 :

	Rs.
Material cost	1,20,000
Labour cost	2,40,000
Fixed overheads	1,20,000
Variable overheads	60,000
Units produced	12,000
Selling price	50 per unit

The available capacity is a production of 20,000 units per year. The firm has an order for the purchase of 5,000 addit ional units at a price

of Rs. 40 per unit. It is expected that by accepting this offer there will be a saving of Re. 1 per unit in material cost on all units manufactured; the fixed overhead will increase by Rs. 35,000 and the overall efficiency will drop by 2 per cent on all production. Draft a report to the management, giving your recommendations as to whether this offer can be accepted. *(I.C.W.A. Final, Modified)*

9. The present volume of sales in a factory is 30,000 units and the management has recently installed modern plants to increase the volume up to a maximum limit of six times the present level. The present selling price is Rs. 24 per unit. Six successive levels of sale with equal increments reaching up to 1,80,000 units are contemplated. The reduction in the selling price is expected to be Rs. 2 at each higher level of sale. The variable costs and semi-variable costs for each level are given below and the present fixed cost of Rs. 1,42,000 is expected to remain constant.

Variable Cost	*Semi-Variable Cost*
Rs.	Rs.
4,18,000	1,50,000
8,18,000	1,50,000
12,78,000	1,70,000
15,78,000	1,70,000
17,78,000	2,00,000
19,02,000	2,00,000

Tabulate indicating the total costs, and increments in sales revenue and profits for the various levels given. Give your recommendations as to the most advantageous level of sales volume. *(I.C.W.A. Final)*

10. An Automobile manufacturing company finds that while the cost of making in its own workshop part No: 0028 is Rs. 6·00 each, the same is available in the market at Rs. 5·60 with an assurance of continuous supply. Write a report to the Managing Director giving your views whether to make or buy this part. Give also your views in case the suppliers reduce the price from Rs. 5·60 to Rs. 4·60. The cost data is as follows :

	Rs.
Materials	2·00
Direct labour	2·50
Other variable costs	0·50
Depreciation and other fixed costs	1·00
	6·00

(I.C.W.A. Final)

11. A manufacturer buys and sells an article. He seeks your advice whether he can himself make and sell it. The following data are relevant :—

	Present (*buy*)	*Proposed* (*make*)
	Rs.	Rs.
Sales	1,00,000	1,00,000
Cost :		
Variable	70,000	64,000
Fixed	22,500	25,600
Capital	50,000	65.000

Give your advice in the matter, taking into due consideration the return on capital under the two alternatives above. (*I.C.W.A. Final*)

12. The following data is given for a factory for 1982 :—
Production—50,000 units.

	Rs.
Materials consumed	75,000
Direct Wages	50,000
Variable production expenses	1,00,000
Variable selling expenses	2,00,000
Fixed expenses	75,000
Total	5,00,000

Selling price per unit—Rs. 12.

It is expected that in 1983 :

(*a*) the factory will produce 1,00,000 units ;

(*b*) prices of materials will go up by 33-1/3% :

(*c*) there will be an increase of 25% in variable selling expenses rate due to increase in the rate of commission to salesmen and extensive advertisement ;

(*d*) fixed expenses will go up by Rs. 25,000.

What will be the cost per unit in 1983 based on a production of 1,00,000 units ?

If it is desired to maintain the same rate of profit on sales as in 1982, what should be the selling price in 1983 ? [*I.C.W.A., Final*]

(Rs. 13·20 per unit)

13. Calculate

(*i*) the amount of fixed expenses

(*ii*) the number of units to break even

(*iii*) the number of units to earn a profit of Rs. 40,000.

The selling price per unit can be assumed at Rs. 100.

The company sold in two successive periods 7000 units and 9000 units, has incurred a loss of Rs. 10,000 and earned Rs. 10,000 as profit respectively. *(I.C.W.A. — Inter. 1979)*

[(*i*) Rs. 80,000 (*ii*) 8000 units (*iii*) 12,000 units]

14. Ricardo Engineering Company has received an export order for its sole product that would require the use of half of the factory's total capacity which is estimated at 4,00,000 units per annum. The factory is currently operating at 60% level to meet the demand of its domestic enstomers only. An against the current price of Rs. 6·00 per unit, the export offer is Rs. 4·50 per unit which is less than the total cost of production, the breakdown of which is given below :

Variable Cost	Rs. 4·00 per unit
Fixed Overhead	Rs. 1·00 per unit
Total Cost	Rs. 5·00 per unit

The condition of the export order is that it has either to be accepted in full or totally rejected. The following alternatives are available for decision-making :

(A) Accept the order and keep domestic sales unfulfilled to the extent of excess demand for the same.

(B) Increase factory capacity by installing a few balancing machines and equipment and also by working overtime to meet the balance of the required capacity. This will increase fixed overhead by Rs. 15,000 annually and the additional cost for overtime work will be Rs. 40,000 per annum.

(C) Reject the order and remain with the domestic market only. Prepare statements indicating the alternatives and suggesting the proposal which would be most convenient to the company. *(I.C.W.A. Final. — June 1981)*

[Alternative (B) yields the highest net profit]

15. A company manufactures a single product in its factory utilising 60% of its capacity which is equivalent to 12,000 units per year. The cost breakdown is as follows :

Direct material	@ Rs. 8·00 per unit
Direct Wages	@ Rs. 10·00 per unit
Variable Overheads	@ Rs. 4·00 per unit

The selling price is fixed at Rs. 45·00 per unit. Fixed overhead application rate has been determined at 125% of direct wages on the basis of 70% capacity utilisation. Selling and Administrative overhead are taken together amounting to Rs. 41,000 per year.

Since the existing product could not achieve budgeted level for two years in succession, the company decides to introduce a new low-priced product. The existing machinery and equipment will be used with some marginal investment, but without creating any bottleneck for the existing product.

The new product numbering 5,000 units is proposed to be produced and sold @ Rs. 25 per unit. The cost estimate are as follows:

Direct material	@ Rs. 6.00 per unit
Direct wages	@ Rs. 7.00 per unit
Variable overheads	@ Rs. 2.50per unit

The fixed factory overheads are expected to go up by 10% and selling and administrative expenses will be increased by Rs 12,000 per annum. There will be an increase of working capital to the extent of Rs. 75,000. The company considers 20% pretax return on capital employed is the minimum acceptable for any project.

You are required to advise the company whether the manufacture of the new product should be taken in hand. (*I.C.W.A. Final—June 1982*)

[—The new product provides a return of 24% and therefore it may be introduced to improve the overall profitability].

16. At the budgeted activity of 75% of total capacity, a company earns a PV ratio of 25% and a profit of 10% on sales. During the course of the year the company had to reduce its price of the product by 10% due to recession and poor offtake. The company was able to achieve actually a production and sales volume for the year equivalent to 50% of its total capacity. The sales value at this level was Rs. 13,50,000 at the reduced price of Rs. 9·00 per unit. Due to reduction in production the actual variable costs went up by 2% of the budget.

Required:

(*i*) Comparative statement of profitability at the budgeted and actual activity.

(*ii*) Find the PV ratio, break-even point in value and units of production at the actual sales activity.

(C A. Final November 1982)

(*i*) Budgeted profit: Rs. 2,25,000; Actual loss Rs. 1,35,000;

(*ii*) B.E.P. in units of the actual sales activity 2,50,000 units.)

Suggested Reading

(1) A Report on Marginal Costing—ICMA, London

(2) Cost Accounting—Cashin and Polmeni

(3) Management Accounting for Profit Control—Keller and Ferrara.

11

Financial Management—Some Aspects

Scope. This is not a book on financial management. However in view of the demand from the professional students, an attempt is made to cover some of the popular topics in a brief manner. Chapter 5 of this section (Section 7) has covered the topics cash budget and working capital budget. In this chapter the topics capital budgeting, cost of capital and leverages are being covered. A list of suggested reading is given at the end of this chapter for the students desiring to have an in-depth study of these and other related topics.

CAPITAL BUDGETING

In the previous chapter we discussed how management takes decisions in the short run. However, management is called upon to take long-term decisions such as general expansion of plant facilities, reorganisation of plant and equipment, measures to improve the quality of products. introduction of new products and the like. Such difficult decisions have long-range implications and are called 'capital budgeting' decisions. Generally decisions relating to investment of money which results in benefits accruing for more than one year are classified as capital expenditure decisions. Capital budgeting problems are common to all enterprises, both profit-making and non-profit-making. Keller and Ferrara* define capital expenditure decisions "as those which involve expenditures made in anticipation of maintaining current revenues and increasing future revenue prospects".

In capital expenditure decisions the management has several alternatives and the question they face is what alternative they should choose to invest their limited resources. Naturally, they would like to choose the one which yields the greatest net benefit. The benefit or return obtained from the investment of such funds must at least be equal to the cost of capital procured for investment.

Basic Components of Capital Budgeting Analysis

Capital expenditure involves the commitment of a large amount of funds and once a decision is taken it becomes difficult to reverse it without incurring heavy loss. Therefore, the decision-making in this area must be taken after a careful analysis of the various aspects involved. The following are the basic components of a capital budget analysis.

Management Accounting for Profit Control.

(1) **Estimating Cost of the Project.** As a firm is not in a position to implement all proposals, it has to estimate cost of the project, to find out projects which are feasible having regard to the amount of funds available. The cost of the project must include cost of installation and working capital requirement as well.

(2) **Estimating Cash Inflows.** These represent the benefits expected in the future as a result of the project. As these relate to future, they must be carefully estimated.

(3) **Determination of Cut-off Rate.** There must be a yardstick to measure the profitability or otherwise of a project. Such a yardstick is provided by the cut-off rate and it is generally based on the firm's cost of capital.

(4) **Ranking the various proposals.** As the resources of the firm are limited and all projects cannot be undertaken, they must be ranked in the order of priority. Ranking differs depending on the method of appraisal and also the type of proposal.

In the case of independent proposals which do not compete with one another the proposals are ranked on the basis of return, after rejecting those that do not provide the minimum rate of return.

In the case of mutually exclusive proposals (the acceptance of one must lead to the rejection of the other) the project that maximizes shareholders' wealth must be accepted. NPV method is most appropriate in this regard.

(5) Time value of money must be taken into account. That is why to estimate the future [illegible] be preferable to accounting profit. [illegible] reason. In all investment proposals the attempt is to determine the economic value and cash flows are more relevant for this purpose.

(6) **Risk and Sensitivity Analysis.** As the data associated with capital budgeting relates to future, one cannot be absolutely certain about such data. Regard must be had to the [illegible] consequent risk factors. [illegible] for risk and uncertai[illegible] sensitivity analysis, for the management to judge the possible consequences of errors in forecasting.

I. Methods of Appraisal

1. **Pay-Back Period.** This is a very simple method to evaluate capital expenditure decisions. Under this method, the period within which the total cash inflows from the project would equal the cost of the project is calculated for each of the alternatives and the project which has the least pay-back period is selected.

Formula:

$$\text{Pay-back period (in years)} = \frac{\text{Cost of project}}{\text{Average net incremental cash flows}}$$

The term average net incremental cash flow means "the increase in revenue plus the savings, if any, in marginal costs". Depreciation is ignored in this calculation.

Merits. This method is suitable to industries, where the risk of obsolescence is very high. In a field like electronics where technological changes are very fast, the investor must be able to recover his investment in the shortest period. Similarly, in some of the defence industries where changes are very fast, this method is best suited. It also facilitates the quick rotation of funds, particularly when funds are in short supply. This method should not be compared with discounted cash-flow methods as the latter are based on profitability. The pay-back technique is a liquidity measure. It merely indicates the period within which the investment will be recovered. So it is better to use this method to supplement the net present value method or its derivative profitability index. Generally management determines the maximum pay-back period having regard to cost of capital. Say if cost of capital is 20%, then the maximum pay-back period will work out to 5 years. So projects involving a pay-back period of more than 5 years will be rejected because of the uncertainties involved.

Demerits. (1) This method does not take into account the return generated by a project after the pay-back period. Projects requiring heavy investment may involve a long pay-back period, but such projects will also last long and yield very high returns.

(2) Even in the case of two projects having the same pay-back period the one which has more cash inflows in the earlier years has to be preferred, if one takes into account the time value of money. As this method does not consider the time value of money, it is inadequate to evaluate two alternative projects where the cash inflows are uneven.

Illustration 1. Pay-back Ltd., proposes to introduce a new machine to increase production capacity of department 'OM'. Two machines are available, type 'Tat' and type 'Sat'. The following information is available in respect of 'Tat' and 'Sat' respectively. Advise which machine should be purchased, employing the pay-back method.

Details	*Tat*	*Sat*
Cost of machine	Rs. 18,000	Rs. 36,000
Estimated life	5 years	6 years
Increase in revenue	Rs. 2,000	Rs. 4,000
Estimated saving in wages	Rs. 5,000	Rs. 6,000
Additional costs to be incurred to run the machines	Rs. 1,000	Rs. 1,000
Estimated saving in scrap	Rs. 500	Rs. 800
Estimated savings in direct materials	Rs. 500	Rs. 200
Additional costs of supervision	Rs. 1,000	Rs. 1,000

Solution :

Details	*Machines*	
	Tat	*Sat*
Estimated working life	5 years	6 years
Cost of machine	Rs. 18,000	Rs. 36,000
Increase in revenue	Rs. 2,000	Rs. 4,000
Estimated savings in wages	Rs. 5,000	Rs. 6,000
Estimated savings in scrap	Rs. 500	Rs. 800
Estimated savings in direct materials	Rs. 500	Rs. 200
Total savings (*i*)	Rs. 8,000	Rs. 11,000
Additional costs of supervision	Rs. 1,000	Rs. 1,000
Additional costs to run the machine	Rs. 1,000	Rs. 1,000
Additional costs (*ii*)	Rs. 2,000	Rs. 2,000
Net cash inflow (*i*—*ii*)	Rs. 6,000	Rs. 9,000
Pay-back period	$\frac{18,000}{6,000}$=3 years	$\frac{36,000}{9,000}$=4 years

II. Discounted Cash-flow Techniques

Before we discuss the discounted cash-flow technique we should understand the concept of present value of money. The basic idea behind discounting future cash inflows is that a rupee received later is not equal to a rupee received now. One of the causes for this, of course, is inflation. But in DCF technique we are not concerned with that factor. One rupee available now can be invested at interest and will be more than rupee one at a future date. So you cannot equate a rupee received in future with a rupee on hand. To illustrate let us take an example A has Rs. 100 on 1-1-80 which, let us say, he can invest @ 100% compound interest, the compounding being done yearly. Now let us calculate the position of investment as on 1-1-81 and 1-1-82.

Principal as on	*Rs.*	*Interest Year*	*Rs.*	*Principal and Interest as on*	*Rs.*
1-1-80	100	1980	100	1-1-81	[illegible]
1-1-81	200	1981	200	1-1-82	[illegible]

Now from the above example it follows that Rs. 200 on [illegible] Rs. 100 on 1-1-80 if the rate of interest is 100%. [illegible] received on 1-1-81 is equal to Re. 0·50 on 1-1-80 [illegible] 100%. Likewise Rs. 400 on 1-1-82 is equal to [illegible] discounted at 100%. In other words, Re. 1 [illegible] Re. 0·25. From this analysis it is clear [illegible] receipts depends on two factors: (*i*) The [illegible]

be received in distant future will have less present value than amounts to be received in near future. (2) The rate of discount. The higher the rate of discount, less is the present value. Given the time of receipt and the rate of discount the present value of cash flows can be calculated with the help of discount factors given in present value tables. Discounting is done by multiplying the cash-flow with discount factor and the process is known as discounting. By discounting all future cash-flows are converted to the present value on a uniform basis.

Two Types of Present Value Tables :

When cash-flows in each year are not the same, present values similar to the ones given in Table 1 below are to be used.

Table 1

Present value of Re. 1 to be received in one payment at the end of a given number of years $(1+r)^{-n}$.

Years	*10%*	*12%*	*15%*	*18%*
1.	0·909	0·893	0·870	0·848
2.	0·826	0·797	0·756	0·718
3.	0·751	0·712	0·658	0·609
4.	0·683	0·636	0·572	0·516
5.	0·621	0·567	0·497	0·437

Discount factors given in Table 2 are derived by adding data in Table 1.

Table 2

Present value of Re. 1 to be received per period $\frac{1-(1+r)^{-n}}{r}$

Years	*10%*	*12%*	*15%*	*18%*
1.	0·909	0·893	0·870	0·848
2.	1·736	1·690	1·626	1·566
3.	2·487	2·402	2·283	2·174
4.	3·170	3·037	2·855	2·690
5.	3·791	3·605	3·352	3·127

When cash-flows are even, the discount factors given in Table 2 can b used. For example, if cash inflows are 2,000 per annum for 4 years an they are to be discounted at 12%, the present value of such flows will be

Rs. 2,000×3·037=Rs. 6,074.

D.C.F. technique can be used in three ways to evaluate capita expenditure decisions. They are (1) Net present value method, (2) Desii ability factor, and (3) Internal Rate of Return. Let us discuss the thre variations in detail.

(1) **Net Present Value Method (NPV).** Under this method a future cash inflows are discounted at some minimum desired rate o return. This minimum rate may be equal to cost of capital or opportunit

cost. If the sum of discounted cash inflows is greater than the sum of discounted cash outflows at various points of time, the net present value is a positive figure and indicates that the project may be taken up. When the management has to choose among several alternative investments, the one with the largest net present value is most desirable. It should be noted that the incremental cash flows are to be calculated before depreciation but after taxation. This is because depreciation is only a book entry and does not result in cash outflow.

Merits. (1) This method takes into account the time value of money. (2) Unlike the pay-back period method, this measures the profitability or otherwise of the project by applying a cut-off rate.

Demerits. When comparison of two projects involving different outlays is to be made, this method is not suitable.

Illustration 2. A Ltd. wants to invest Rs. 12,000 in a project which will yield net incremental cash flows of Rs. 5,000 per annum for 3 years. If the desired rate of return is 12%, advise the company whether it is desirable to take up the project.

Year	*NCF*	*Discount Factor*	*PV*
0	−12,000	1·000	−12,000
1	+5,000	0·893	+4,465
2	+5,000	0·797	+3,985
3	+5,000	0·712	+3,560
	Net Present Value		+10

Since the net present value is a positive figure, the project yields the desired rate of return and therefore the company should be advised to go ahead with the project.

Tutorial Note. In this problem since the cash inflows are even, it is not necessary to discount every year, to obtain the sum of discounted cash inflows. We can obtain the value by using the discount factor given in Table 2, thus,

$$\text{Rs. } 5{,}000 \times 2{\cdot}402 = \text{Rs. } 12{,}010$$

It is the same as the sum of discounted cash inflows for the three years.

(2) **Profitability Index.** This is also called desirability factor and is an improved version of net present value method. This index shows the relationship between the sum of discounted cash inflows and the sum of discounted cash outflows. The cash inflows and outflows are discounted either at the rate equal to cost of capital or opportunity cost. Expressed as a formula

$$\text{Profitability Index} = \frac{\text{Sum of discounted cash inflows}}{\text{Sum of discounted cash outflows}}$$

This method is helpful to compare projects involving different outlays and thus helps in ranking the projects which are competing for limited funds. Projects can also be ranked on the basis of internal rate of return. Since the basic assumption of all discounting is the possibility of reinvesting the funds at the discounted rate, profitability index which

is obtained from discounting at a rate equal to cost of capital or the opportunity cost is more realistic and relevant than the internal rate of return.

Illustration 3. A firm whose cost of capital is 10% is considering two mutually exclusive projects X and Y, the details of which are as under :

	Project X	*Project Y*
	Rs. 78,000	Rs. 1,00,000
Cash flow year 1	10,000	50,000
Cash flow year 2	20,000	40,000
Cash flow year 3	30,000	35,000
Cash flow year 4	45,000	35,000
Cash flow year 5	60,000	40,000
	1,65,000	2,00,000

Discount factors @ 10%

Year	1	2	3	4	5
Factor	0·909	0·826	0·751	0·683	0·621

Advise the firm as to which project is better.

Solution :

N.P.V. of the projects, cost of capital of the firm being 10%

Year	*Project X* Rs.	*Project Y* Rs.	*P.V. Factors @ 10%*	*Discounted Cash Flows Project X* Rs.	*Discounted Cash Flows Project Y* Rs.
0	−70,000	−1,00,000	1·000	−70,000	−1,00,000
1	10,000	50,000	0·909	9,090	45,450
2	20,000	40,000	0·826	16,520	33,040
3	30,000	35,000	0·751	22,530	26,285
4	45,000	35,000	0·683	30,735	22,305
5	60,000	40,000	0·621	37,260	24,840
	Net Present Value			46,135	51,920

Profitability Indices

$$\text{Project } X \quad \frac{\text{Discounted cash inflows}}{\text{Discounted cash outflows}} = \frac{1,16,135}{70,000} = 1·659$$

$$\text{Project } Y \quad \frac{\text{Discounted cash inflows}}{\text{Discounted cash outflows}} = \frac{1,51,920}{1,00,000} = 1·519$$

Project X is acceptable under NPV method as its value is more than that of project Y. However, if we apply the profitability index, project X is

preferable to project Y. We may use the NPV method [illegible] acceptability of the project, because of its superiority [illegible] index. NPV method clearly indicates that after [illegible] capital, project Y adds more to shareholders' wealth [illegible]

Internal Rate of Return (IRR)

This is another variation of discounted cash flow [illegible] the NPV method we use a pre-determined rate to [illegible] posal. In this case a rate is arrived at, which will equate [illegible] discounted net cash inflows with the sum of discounted [illegible] project.

$$\frac{\text{Sum of discounted cash inflows}}{\text{Sum of discounted cash outflows}} = 1.$$

In other words, it is a rate at which NPV [illegible] zero. If discounting at a rate gives a positive NPV, [illegible] used such that NPV is equal to zero. Such [illegible] becomes zero is called the internal rate of return [illegible] as "the maximum rate of interest that could be [illegible] employed over the life of an investment without [illegible]."[1]

After computing IRR, a comparison is made [illegible] of return known as the cut-off rate or hurdle rate [illegible] accepted if IRR rate is more than the cut-off rate [illegible] than the cut-off rate the proposal would be rejected [illegible] equal the firm is indifferent as to whether to accept [illegible]

Illustration 4. Using the data in illustration [illegible] the two projects.

Solution: For calculating IRR discounting [illegible] first with an approximate rate. If it results in a positive NPV, a higher rate is used to reduce the balance to zero. On the other hand, if NPV results in a negative value, a lower rate is used. The process goes on till we arrive at the correct rate.

Project X:

Year	*Cash Flows* Rs.	*P.V. Factors at 25%*	*Discounted Cash Flows* Rs.	*P.V. Factors at 30%*	*Discounted Cash Flows* Rs.
0	−70,000	1·000	−70,000	1·000	−70,000
1	10,000	0·800	8,000	0·769	7,690
2	20,000	0·640	12,800	0·592	11,840
3	30,000	0·512	15,360	0·455	13,650
4	45,000	0·410	18,450	0·350	15,750
5	60,000	0·328	19,680	0·269	16,140
			+4,290		[illegible]4,9[illegible]0

$$IRR = 25\% + \frac{4290}{9220} \times 5 = 27.32\%$$

[1]Return on capital as a guide to managerial decisions. NAA Research Re[illegible] No. 35.

Project Y :

Year	Cash Flows	P.V. Factors at 30%	Discounted Cash Flows	P.V. Factors at 35 %	Discounted Cash Flows
	Rs.		Rs.		Rs.
0	−1,00,000	1·000	−1,00,000	1·000	−1,00,000
1	50,000	0·769	38,450	0·741	37,050
2	40,000	0·592	23,680	0·549	21,960
3	35,000	0·455	15,925	0·406	14,210
4	35,000	0·350	12,250	0·301	10,535
5	40,000	0·269	10,760	0·223	8,920
			1,065		−7,325

$$\text{IRR}=30+\frac{1065}{8390}\times 5=30{\cdot}63\%.$$

Merits. 1. As it considers the time value of money and also takes into account the cash flows, it has the advantages of NPV method.

2. The concept of IRR is better understood than the concept of NPV.

Demerits. 1. The calculation is very tedious and complicated.

2. In evaluating mutually exclusive projects, the one with high IRR may be chosen but it may not be the one resulting in maximisation of wealth.

3. The calculation of different IRR rates for two projects presupposes the reinvestment of such funds at such rates. It is unrealistic to consider that the same firm will reinvest at different rates.

Comparison of NPV and IRR Methods

1. NPV is calculated by using required rate of return as the discount rate. Under the IRR method rate of return which equates the sum of discounted cash inflows with the sum of discounted cash outflows is ascertained.

2. If the NPV is zero or positive the project is accepted. If IRR is more than the cut-off rate the project is accepted, otherwise it is rejected.

3. Sound projects are accepted under both the methods and unsound projects are rejected. This is true in the case of all independent proposals.

4. However, in the case of mutually exclusive projects the two methods may indicate contradictory decisions. From the point of view of maximisation of shareholders' wealth, it is better to follow the NPV method.

5. The basic assumption behind discounting is that the cash inflows can be reinvested at the discounting rate in the new projects. Keeping in view this assumption, NPV method is more realistic than IRR in ranking two or more projects.

III. Accounting Rate of Return Model

In this model the additional profits expected of a project are calculated as a percentage of the average amount invested. This is also known as the unadjusted rate of return model and the financial statement model. This may be expressed as

$$\frac{\text{Average annual increase in the future net profit}}{\text{Average amount invested}} \times 100$$

The numerator is ascertained by adding up the anticipated after-tax profits during the life of the project and dividing it by the number of years. For arriving at the average amount invested, the following formula is used.

$$\text{Net working capital} + \text{salvage value} + \tfrac{1}{2}(\text{Initial cost of machine} - \text{Salvage value})$$

This method is not favoured by finance managers as it does not take into account the time value of money.

Illustration 5. The plant and machinery in a works department produces 2,400 units per annum all of which are sold at a fixed price of Rs. 5 per unit. Average annual costs incurred are Rs. 6,000 for direct materials, Rs. 200 for direct labour and Rs. 500 for fixed overhead.

The plant and machinery cost Rs. 2,000 and its estimated scrap value at the end of 10 years is Rs. 500.

Management proposes to replace it by a new plant costing Rs. 12,000. If this step is taken output and sales are expected to increase 50 per cent without alteration in indirect labour costs or fixed overhead.

Assuming that the new plant and machinery has an effective working life of ten years and that on average, over the life of a fixed asset, only half of the capital remains invested, calculate :

(*a*) the increased annual profit ; and

(*a*) the yield per cent on the new investment.

Solution :

(*a*) PROFITABILITY STATEMENT

Particulars		*Machine* *Old*		*New*
Output		2,400		3,600
Selling price per unit		Rs. 5		Rs 5
Investment		Rs. 2,000		Rs. 12,000
Estimated scrap value		Rs. 400		Nil
Estimated life				10 years
Sales		Rs. 12,000		Rs 18,000
Less : Marginal costs :				
Direct Material	Rs. 6,000		Rs 9,000	
Direct Labour	Rs. 200	Rs. 6,200	Rs 200	Rs 9,200
Marginal Income		Rs. 5,800		Rs. 8,800
Less : Fixed overheads	Rs. 500		Rs 500	
Depreciation	Rs. 160	Rs. 660	Rs. 1,200	Rs 1,700
Profit net of depreciation		Rs 5,140		Rs 7,100

interest is allowed for determining taxable profits. In the case of preference shares, the cost is the rate of preference dividend agreed to be payable on such shares. However, it is very difficult to determine the cost of equity shares, as there is no agreed rate of dividend payable in respect of such shares. One way to overcome this problem is to consider current dividend rates in relation to market values as the cost of equity funds. Since dividend rates are the result of arbitrary decisions taken by the board of directors, a better measure for the cost of equity shares is earnings per share in relation to market values. Under this method the cost of capital is related to the total earnings attributable to equity capital.

(2) The second question is : Can the finance manager influence the cost of capital by changing the proportion of funds drawn from different sources ? To be precise, can he reduce the cost of capital by increasing debt since it is cheaper than equity funds ? The traditional theorists were of the view that a firm can change its overall cost of capital by changing the debt-equity mix, since loan funds are cheaper than equity funds. Therefore, by increasing the proportion of loan funds, according to the traditional view, it would be possible to decrease the cost of capital.

This view of the traditional theorists has been disputed by another school of thought known as Modigliani-Miller approach. According to this school of thought there is a relationship between company's capital structure and the cost of its debt and equity capital. The cost of capital is, therefore, independent of the method or level of financing. Change in the debt equity ratio does not affect the cost of capital. This is based on the logic that when the proportion of debt increases, it increases the financial risk, which results in an increased cost of equity capital because of an increase in the expectations of equity shareholders. So it is not possible for a firm to increase the debt without increasing the cost of equity capital and *vice versa*. This approach is correct if the capital markets are perfect. In reality, however , it is possible to reduce the cost of capital, by increasing the debt content because of its cheapness and the tax advantage.

(3) The difficulty in computing the cost of equity capital is already referred to. Theoretically the directors need not declare any dividend on the equity capital. So there is no out-of-pocket cost involved. But unless investors have expectation of dividend, they will not invest in the equity shares. Without dividends being declared market values of shares cannot be maintained and it will be difficult for the company to raise fresh capital. In order to maintain the market price of shares, the company must earn a minimum rate of return on that portion of capital employed which is financed by equity. Such minimum rate of return represents the cost of equity capital. This may be taken as the rate of return expected by the investors to maintain the current market prices of shares. There are different approaches for determining the cost of equity capital. They are :

(*i*) Dividend-price ratio approach. According to this approach the market value of a share is nothing but a capitalised value of anticipated dividend payments from the investment. Therefore the market price of the shares is determined by investors' expectation of dividend and that determines the cost of capital.

(*ii*) Earnings-price ratio approach. Here the market price of the share is a capitalised value of the future earnings. Therefore, the cost of capital depends on the earnings rate which will keep the current market prices of shares intact.

(*iii*) Dividend-price plus growth approach. In this approach the market value depends not only on the dividend but also on the growth rate of dividend. The growth rate of dividend is linked to growth rate of earnings and the market value of the share.

(*iv*) Realised yield approach. All the three approaches discussed earlier may pose problem of calculation as they are based on anticipated dividends, income and anticipated growth rates. So some suggest that a realistic measure of cost of capital is to calculate the yield realised in the past.

(4) The computation of the cost of retained earnings and depreciation funds also poses problems. Here also there is no agreement regarding the computation, but it is preferable to adopt the same approach as for the computation of cost of equity capital.

(5) As the cost of capital is required for capital expenditure decisions, the question arises whether one should use the marginal cost of capital or average cost of capital. It is because of these difficulties, some authors suggest the use of minimum acceptable rate of return instead of cost of capital. Minimum acceptable rate of return is usually higher than cost of capital, as it takes into account the risk and uncertainty inherent in the *proposed projects.*

(6) The total cost of the capital is a weighted average cost. The weights used may be book values or market values of the funds. The two approaches lead to different results. Some authors prefer the use of market value rather than book value since the former facilitates the calculation of current cost of capital.

Again the calculation of overall cost of capital may be on 'before tax basis' or 'after tax basis'. As the dividend can be paid only after meeting taxation liabilities, it is preferable to base the cost of capital on after-tax profits.

From the above discussion it can be seen that it is a futile exercise to [illegible]. Because of the [illegible] which it lies.

LEVERAGES

A company by judiciously increasing the proportion of funds raised at fixed cost in its capital structure, can secure advantage to its equity shareholders. This of course is possible if two conditions are satisfied. They are (1) the average return on capital employed is higher than the fixed cost at which funds are raised by issue of debentures and preference shares and (2) the risk arising out of committed interest charges is not too high. This process of securing an advantage to equity shareholders by increasing the employment of an asset or funds for which the firm pays a fixed cost or fixed return is referred to as leverage.

Illustration 7. *It is proposed to start a company which requires an investment of Rs. 20 lakhs and the return anticipated is 25%. Calculate the maximum dividend that can be paid to equity shareholders, (i) if the entire capital is raised by issue of equity shares and (ii) if Rs. 12 lakhs is raised by the issue of debenture @ 12% interests. Ignore tax.*

Solution :

(*i*) Where the entire capital is raised by issue of preference shares, a maximum dividend of 25% can only be paid.

(*ii*)

	Rs.
Capital employed	20,00,000
Profits @ 25% on capital	4,00,000
Less : Payment of debenture interest @ 12% on Rs. 12 lakhs	1,44,000
Profits available for distribution as equity dividend	2,56,000

Maximum dividend that can be paid to equity shareholders

$$= \text{Rs.} \frac{2,56,000}{8,00,000} = 32\%.$$

This sort of securing an advantage to equity shareholders is referred to as 'Trading on equity'.

Financial and Operating Leverage

The concept of leverage analysis is significant for planning and corporate profit and financial structure. There are basically two types of leverages, namely, operating leverage and financial leverage. Combining these two in varying proportions a third leverage known as composite leverage can be developed.

Operating leverage. This may be defined as the tendency of net income to vary disproportionately with sales. When a firm's operating profits fluctuate disproportionately because of fluctuations in sales, the firm is said to have operating leverage. This happens when a firm is having high proportion of fixed costs which are to be incurred regardless of the volume or value of sales. The fixed costs remain the same irrespective of the changes in sales and this causes a disproportionate change in the operating profit. Operating Leverage is calculated by the formula

$$\frac{\text{Contribution}}{\text{Earning before interest and tax}} = \frac{C}{EBIT}$$

Thus the operating leverage is a function of three factors, namely, the amount of fixed expenses, the contribution margin and the volume of sales. Operating leverage is said be favourable when contribution is more than fixed cost and unfavourable when fixed cost is more than contribution.

Financial Leverage. This is determined by the debt and equity mix in financing the firm's assets. Financial leverage indicates the tendency of the residual income varying disproportionately with net income. Financial

leverage can be secured by increasing the proportion of debt capital in the total capital of the company. In such a case if there is change in the return on funds, the share of the debt holders remains the same and thus causing disproportionate changes in the residue available to equity shareholders. Therefore in the case of enterprises having a high debt-equity ratio, financial leverage will be higher, due to the presence of relatively high amount of fixed charges. Degree of financial leverage is calculated by the formula

$$\frac{\text{Earnings before interest and tax}}{\textit{Earnings before tax}} = \frac{\text{EBIT}}{\text{EBT}}$$

There is another way of calculating the degree of the financial leverage by using the following formula.

$$= \frac{\text{Percentage change in earnings per share}}{\text{Percentage change in earnings before interest and taxes}}$$

Combined or Composite Leverage. The composite leverage is the product of these two leverages. While operating leverage measures the operating risk, financial leverage measures the financial risk of the enterprise. The composite leverage measures the total risk involved in a company as it is a multiple of the two leverages.

Composite Leverage = Operating leverage × Financial leverage.

$$= \frac{C}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{EBT}} = \frac{C}{\text{EBT}}$$

From the above formula it can be seen that the composite leverage expresses the relationship between contribution and taxable income.

Illustration 8. Calculate the degree of operating leverage, degree of financial leverage and combined leverage from the following data :—

Sales 1,00,000 units @ Rs. 2 per unit = Rs. 2,00,000.

Variable cost per unit @ Re. 0·80.

Fixed Costs = Rs. 1,00,000

Interest charges = Rs. 4,000. *(C.A. Final Nov. 1980 modified)*

Solution

(*A*) *Workings* :

	Rs.
Sales (1,00,000 × Rs. 2)	2,00,000
Less : Variable Cost (1,00,000 × Re. 0·80)	80,000
Contribution (C)	1,20,000
Less : Fixed Costs	1,00,000
Earnings before interest and tax (EBIT)	20,000
Less : Interest charges	4,000
Earnings before tax (EBT)	16,000

(*B*) *Computation of Leverages* :

(*i*) Degree of operating leverage $= \frac{C}{EBIT} = \frac{1,20,000}{20,000} = 6$

(*ii*) Degree of Financial Leverage $= \frac{EBIT}{EBT} = \frac{20,000}{16,000} = 1{\cdot}25$

(*iii*) Degree of composite or combined leverage $= 6 \times 1{\cdot}25 = 7{\cdot}5$

or $\frac{C}{EBT} = \frac{1,20,000}{16,000} = 7{\cdot}5$

Significance of the Leverages to Financial Manager

The main objective of the financial manager is to optimise the wealth of shareholders in the long run. For this purpose he has to make an intelligent use of operating leverage in profit planning and financial everage in planning the capital structure. If the fixed costs are more it results in high break even- point and profit can be secured only with a high volume of sales. But once the level of sales is high the firm will be able to secure more and more profits. So enterprises with relatively more fixed costs are riskier than enterprises with less fixed costs. The use of operating leverage analysis enables the finance manager to determine profits at various levels of production and plan for his profits having regard to market risks.

Financial leverage analysis helps the finance manager to determine the financial structure. As explained in the illustration a firm can secure a higher return on owners' investment by trading on equity. But this is a risky proposition if for some reason the average return on capital employed goes down. In such an event, the residual income for owners will be very much reduced. It is for the finance manager to determine the proper and safe debt-equity mix, having regard to likely fluctuations in the operating profits.

If the finance manager resorts to both high operating leverage and high financial leverage, it increases the total risk as the combined effect of these two is a multiple of the two leverages. Keeping the two leverages at a low level is a conservative approach and does not help the maximisation of wealth. Therefore, the finance manager should try to keep the financial leverage low if the enterprise is having a high operating leverage in order to minimise the total risk. Likewise, if the firm is having a low operating leverage, he should take advantage by resorting to high financial leverage, so that a high return can be secured on owners' investment. Since the other fixed costs are low, the commitment on account of interest charges on borrowed funds does not aggravate the risk.

SUGGESTED READING

1. *Financial Management*—Khan and Jain.
2. *Management Accounting & Financial Control*—S.N. Maheshwari.
3. *Financial Management and Policy*—Van Horne.
4. *Capital Budgeting*—J. Dean.
5. *Financial Management*—S.C. Kuchhal.

ASSIGNMENT MATERIAL

Questions :

1. Define capital budgeting and state its role in decision-making.

2. What are the basic components of capital budgeting analysis? Compare and contrast IRR and NPV methods.

3. Enumerate the ways in which the preparation of capital budget helps the management.

4. State how you consider the 'pay back' method useful for assessing the economic worth of a project.

5. "Despite all limitations of the method of pay-back period, it has still got significance in project appraisal." Explain.

6. Discuss the problems of ranking projects with varying economic lives, sizes, patterns of cash outflows and inflows.

7. Discuss the methods used for evaluating and ranking of investment proposals.

8. What is meant by the cost of capital for a firm and what relevance does it have in decision-making? How is it calculated for different types of sources of capital funds? Why is the cost of capital most appropriately measured on an 'after-tax' basis?

9. Critically examine the various approaches to determine the cost of equity.

10. Examine the significance of operating and financial leverage analysis for a financial executive in corporate profit and financial planning.

Problems :

1. The Tamilnadu Fertilizers Ltd. is considering a proposal for the investment of Rs. 5 lakhs on product development which is expected to generate net cash inflows for 6 years as under :

Years	*Net cash flows Rs. (in thousands)*
1	Nil
2	100
3	160
4	240
5	300
6	600

The following are the present value factors @ 15% per annum.

Year 1	...	0·87
Year 2	...	0·76
Year 3	...	0·66
Year 4	...	0·57
Year 5	...	0·50
Year 6	...	0·43

The company's cost of capital is 15%. Advise the company on the desirability or otherwise of accepting the proposal.

(*M. Com. Madras, May 1977*)

[As the Net Present Value is a positive figure of Rs. 226·4 (in thousands) the proposal can be accepted].

2. The management of a firm is considering an investment project costing Rs. 1,50,000 and it will have a scrap value of Rs. 10,000 at the end of its 5-year life. Transportation charges are expected to be Rs. 5,000 and installation charges are expected to be Rs. 25,000. If the project is accepted, a spare parts inventory of Rs. 10,000 must also be acquired and maintained. It is estimated that the spare parts will have an estimated scrap value after 5 years to 60% of their initial costs.

Annual revenue from the project is expected to be Rs. 1,70,000 and annual labour, material and maintenance expenses are estimated to be Rs. 15,000, Rs. 50,000 and 5,000 respectively. The depreciation and taxes for each of the five years will be :

Year	*Depreciation*	*Taxes*
1	72,000	11,200
2	43,200	22,720
3	32,400	27,040
4	21,600	31,360
5	800	39,680

Calculate net cash flows for each year and cost of the project. Evaluate the project at 12% rate of interest. The discount factors at 12% are :

Year	1	2	3	4	5
Factor	0·9	0·8	0·7	0·6	0·57

[*C.A. Final (N.S.) Nov. 1981*]

Hints : (1) Net cash flows are to be calculated dy deducting taxes but not depreciation.

(2) The scrap value of the project and spare parts must be taken as the cash inflow of the last year.

[(*i*) Project cost Rs. 1,90,000 ; (*ii*) Net Present Value @ 12% rate+Rs. 87,502. Therefore the project can be accepted].

3. The financial manager of a company has to advise the board of directors on choosing between two competing project proposals which require an equal investment of Rs. 1 lakh and are expected to generate cash flows as under :

		Project I	*Project II*
		Rs.	*Rs.*
End of year	1	48,000	20,000
,,	2	32,000	24,000
,,	3	20,000	36,000
,,	4	Nil	48,000
,,	5	24,000	16,000
,,	6	12,000	8,000

Which project proposal should be recommended and why ? Assume the cost of capital to be 10% p.a. The following are the present value factors at 10 per cent per annum.

Year	1	2	3	4	5	6
Factor	0·909	0·826	0·751	0·683	0·621	0·564

(M. Com. Madras, May 1980)

Hint : As they are competing proposals NPV method is the most appropriate.

4. A company has an investment opportunity costing Rs. 40,000 with the following expected net cash flow (*i.e.*, after taxes and before depreciation).

Year	*Net cash flow* Rs.
1	7,000
2	7,000
3	7,000
4	7,000
5	7,000
6	8,000
7	10,000
8	15,000
9	10,000
10	4,000

Using 10% as the cost of capital, determine the following :

(*a*) Pay-back period.

(*b*) Net present value at 10% discounting factor.

(*c*) Profitability index at 10% discounting factor.

(*d*) IRR with the help of 10% discounting factor and 15% discounting factor.

Year	1	2	3	4	5	6	7	8	9	10
10% discounting factor	0·909	0 826	0·751	0·683	0·621	0·564	0·513	0·467	0·424	0·386
15% discounting factor	0·870	0·756	0·658	0·572	0 497	0·432	0·376	0·327	0·284	0·247

[C.A. Final (N.S.), May, 1979]

[(*a*) Simple pay-back period 5⅝ years ; on the basis of discounted cash flows 7½ years. (*b*) NPV @ 10% discount rate Rs. 8,961. (*c*) PI 1·22. (*d*) IRR 14·7%.]

5. *Calculate the degree of operating leverage, degree of financial* leverage, and the degree of combined leverage for the following firms and interpret the results.

	B	*Q*	*R*
Output (units)	3,00,000	75,000	5,00,000
Fixed costs (Rs.)	3,50,000	7,00,000	75,000
Unit variable cost (Rs.)	1·CO	750	0·10
Interest charges (Rs.)	25,000	40,000	Nil
Unit selling price (Rs.)	3·CO	25,00	0·50

[*C.A. Final* (*NS*) *Nov. 1981*]

	B	*Q*	*R*
[Operating Leverage	2·4	2·14	1·6
Financial Leverage	1·11	1·07	1·0
Combined Leverage	2·67	2·29	1·6]

6. (*a*) X Corporation has estimated that for a new product its break-even point is 2,000 units, if the item is sold for Rs. 14 per unit ; the cost accounting department has currently identified variable cost of Rs. 9 per unit. Calculate the degree of *operating leverage for sales volume of* 2,500 units and 3,0C0 units. What do you infer from the degree of operating leverage at the sales volume of 2,500 units and 3,000 units and their difference if any ?

(*b*) A firm has sales of Rs. 10,00,000, variable cost of Rs. 7,C0,000 and fixed costs of Rs. 2,00,000 and debt of Rs. 5,00,000 @ 10% rate of interest. What are the operating, financial and combined leverages ? If the firm wants to double up its EBIT, how much of a rise in sales would be needed on a percentage basis. [*C.A. Final* (*NS*) *Nov. 1979*]

(*a*) Operating leverage @ 2,500 units 5 and at 5000 units 3.

[illegible] *s the operating* [illegible]*verage is* 3, *EBIT can be doubled by an* [illegible]rease of 33⅓[illegible] sales.]

The comparative purchase and operating cost data are given below :

		Petrol truck	*Battery-powered Truck*
Purchase cost		1,50,000	2,[illegible]0,000
Operating cost year	I	24,000	12,000
,,	II	34,000	12,000
,,	III	29,000	12,000
,,	IV	31,000	12,000
,,	V	——	12,000

Assume an investment incentive of 100 per cent initial depreciation allowance and a 50 per cent incidence of corporate tax. No depreciation is allowed in subsequent years. Taxes are promptly paid. A return of 10 per cent after tax and investment incentives is required. Would it be advisable to buy the petrol truck or the battry-powered truck ? Present your tabulations supporting your decision. The present value factors, for discounting at 10 per cent are

year 1—0·909	year 2—0·826	year 3—0·751
year 4—0·683	year 5—0·621	

The annuity factors for discounting Re. 1 per annum for 4 years, at 10 per cent, is 3·17 and 5 years, at 10 per cent is 3·79.

[I.C.W.A. Final Dec. 1981]

Hints : (1) Calculate discounted cash flows for each alternative.
(2) Divide the discounted cash flows by annuity factor to arrive at annual value of each alternative. (3). The one with lesser annual value is to be purchased.

[Purchase of petrol truck is advisable]

[illegible] *purchase a machine.* Two [illegible] Rs. 5,00,000. In comparing [illegible] rate of 10 per cent is to be [illegible] be as under :

Year	*Cash flow* *Machine A*	*Machine B*
I	1,50,000	50,000
II	2,00,000	1,50,000
III	2,50,000	2,00,000
IV	1,50,000	3,00,000
V	1,00,000	2,00,000

Indicate which of the machine would be a more profitable investment using the following methods of ranking investment proposals.

(*a*) Pay-back method.

(*b*) Net present value profitability.

(c) Post pay-back method.

(d) Return on investment method.

The discount factor at 10 per cent is

Year	1	2	3	4	5
Factor	0·9091	0·8264	0·7513	0·6830	0·6209

(*A.C.S. Final June 1981*)

[Pay back method : Machine A
Net present value : Machine A
Post pay-back profitability : Machine B
Return on investment : Machine B].

10. Following data in respect of two machines namely A and B are detailed below. Depreciation has been charged on straight line basis and estimated life of both machines is five years.

Item	Machine A	Machine B
Cost	Rs. 56,125	Rs. 56,125
Net income after depreciation and taxes.		
Ist year	3,375	11,375
2nd year	5,375	9,375
3rd year	7,375	7,375
4th year	9,375	5,375
5th year	11,375	3,375
	36,875	6,875

Find out :—

(a) Average rate of return on 'A' and 'B' machines.

(b) Which machine is better from the point of view of pay-point back period and why ?

(c) Calculate average rate of return when salvage value of machine 'A' turns out to be Rs. 3,000 and when 'B' machine has zero salvage value. (*A.B.S. Final Dec. 1981*

		Machine A	*Machine B*
[(a)	A.R.R	26·28%	26·28%

(b) Machine B is better since initial cash flows are more than for Machine A.

(c)	A.R.R	24·95%	26·28%]

Suggested Reading

(1) Financial Management and Policy—Van Horne

(2) Financial Management—Khan and Jain.

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